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TELEGRAPHIC ADDRESS—LANCET, WESTRAND LONDON TELEPHONE NUMBER—GERRARD 5356

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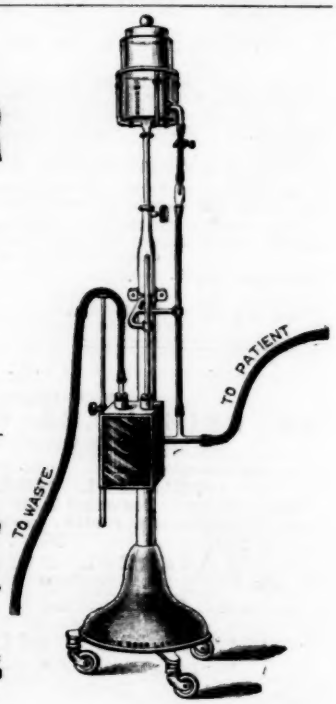

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CASE 1.—A primipara, aged 35, seen in February, 1888. Married eight months and six months pregnant. Had a contracted pelvis, conjugata vera $3\frac{1}{16}$ in. Several uterine fibroids present: one on the left side of the body as big as a large watch, and another as big as a hen's egg on the left side of the lower segment, movable on a thick pedicle, and coming down as low as the vaginal fornix. I advised induction of labour at the seventh month. This was attempted by means of bougies, laminaria and sponge tents, and Barnes's bags; but, owing to the rigidity and small size of the cervix, without any effect. Finally, the cervix was dilated under chloroform with Barnes's bags and the child turned; craniotomy had to be performed on the after-coming head. The labour was a very difficult one, the patient being under chloroform for three hours. After delivery the uterus was found to have a large irregular mass of fibroids on the right side running nearly the whole length of the organ and causing it to reach, when involution was complete, within $\frac{1}{2}$ in. of the umbilicus. The puerperium was perfectly normal.

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CASE 2.—H., aged 38, married five years (children 0, abortion 0), 6 ft. 1 in. in height, in perfect health. A fibroid as big as a thick watch was found on the left side of the lower segment, and several small fibroids of the size of marbles and walnuts at the top of the fundus on each side. Labour at term, Oct. 11th, 1919, lasted $8\frac{1}{2}$ hours; pains normal; delivery natural; no post-partum hæmorrhage. Child strong, $9\frac{1}{4}$ lb. Puerperium afebrile. The patient has not been informed of the existence of the tumours.

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CASE 6.—T., aged 42, married eight years, never previously pregnant. Seen on April 26th, 1905. Pain in the right side of the abdomen of two months' duration. Nearly five months pregnant. Menstruation had always been regular, lasting three days, and usually preceded by pain.

The uterus was much larger than it should be, owing to a fibroid about as big as a fœtal head and a larger one as big as a coconut in the right cornu. (See Fig. 1.)

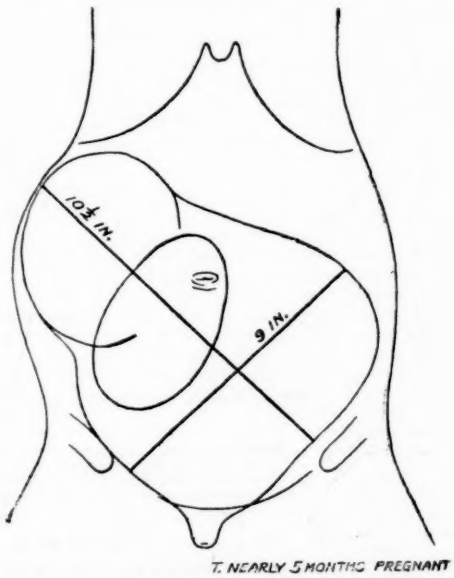

FIG. 1.—Case 6, showing two large fibroids.

A girl was delivered alive (a breech presentation) by Dr. Pearce, of Ripley, on Oct. 2nd, 1905. The mother made an excellent recovery. The uterus contained such a large mass of fibroids that on the fourteenth day of the puerperium it measured $10\frac{1}{2}$ in. transversely, and reached up for $1\frac{1}{2}$ in. above the umbilicus. Fourteen years later, on Nov. 18th, 1919, mother and child were both very well. No pregnancy since. Menstruation regular till 1911, when she was 50 years of age. The uterus was then small and atrophied, freely movable, and, except a slight irregularity of its surface, no sign of the fibroids could be found.

CASE 7.—On Sept. 26th, 1894, M., a nullipara, aged 37, was sent to me by Dr. Lennox Wainwright, of Folkestone. Married twice, the first time at the age of 20; but although married many years to her first husband, no coitus had occurred. Her second marriage took place July 1st, 1894. A few days afterwards she had a period, but none since. In the last three days she had been sick, and for three weeks she had had frequency of micturition. At the age of 14 she had an attack of peritonitis, which was repeated in 1886 and 1892, and since then had had several threatenings, and a well-marked attack three weeks ago. Menstruation began at the age of 11, and was regular except at the age of 19, when it stopped for 13 months; it was always very painful.

On examination the abdomen was tender and distended by a tumour, which reached up to the umbilicus on the left side and rather higher on the right, where there was a marked movable projection as big as a fist. The tumour felt like a myoma and near the middle of it there was a marked thrill. The uterus was retroverted, apparently enlarged, and seemed to pass into a hard mass above and around the cervix. To

the left of the cervix projected a solid mass connected with the uterus, which came down to the level of the edge of the cervix. The diagnosis was made of pregnancy of 2 to 2½ months complicated with multiple fibroids. With rest the patient progressed

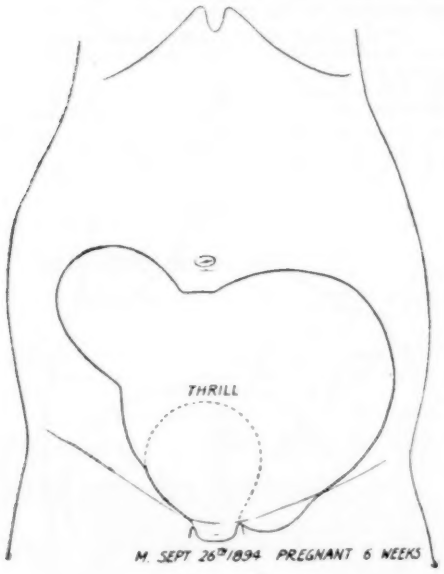

FIG. 2.—Case 7. The larger figure shows the size of the tumours at the sixth week of pregnancy; the smaller figure shows the size of the uterus 20 years later.

fairly well, but on Oct. 28th, 1894, I was called to Folkestone and found her extremely ill, vomiting frequently, and obstinately constipated. A large enema of soap and water was successfully administered and the patient recovered completely. At this time the fundus had then risen out of the pelvis, but the fibroid on the left side still occupied the brim. At the beginning of April, 1895, the patient came to London with a view to a Cæsarean section. The head was above the brim and the lower end of the large fibroid just entered the pelvic brim on the left side, otherwise the pelvis was free and of full dimensions. The urine contained much albumin, and on consultation with Sir John Williams it was decided to induce labour on this account. This was done with bougies. During the labour the fibroid on the left side retracted above the brim and a well-developed girl of about 8½ months' development was born alive, after a normal labour, on April 7th, 1895.

On May 7th, 1914, I saw the mother, aged 57, in good health. Menstruation stopped at the age of 47. The uterus was of the size of a fist, hard, and of the shape shown in the diagram. (See Fig. 2.)

CASE 8.—T., aged 26, consulted me in 1893 for dysmenorrhœa of three years' duration. The pain occurred a week before and during the whole of the period, which used to last eight days and lately six days. The uterus was small, the body a little irregular on the right side owing to the presence of a small fibroid. There was a body twice the size of an ovary on the left side; this was evidently the large fibroid found later. The right side of the lower segment also felt hard, as if from the presence of a small fibroid.

After she had been married 3½ years she was sent to me by Dr. F. W. Lyle, of Ealing, on June 12th, 1899. Although only three months pregnant (for the first time), the uterus reached up to a height of 6½ in. above the pubes, owing to the presence of three fibroid tumours, the largest of which was nearly as big as a child's head, the smallest encroaching upon the brim on the right side. She was delivered by Dr. Lyle of a living child on Jan. 12th, 1900, 297 days after the last day of the last period, and recovered well. She was again delivered, with low forceps, of a living child, which weighed 9 lb. 7 oz., on Dec. 28th, 1903, 287 days after the last period. The labour lasted 5¾ hours. Mother and children alive and well on Nov. 5th, 1919. No further pregnancies. She had begun to menstruate at the age of 14, and still menstruated (at the age of 52).

CASE 12.—S. H., a nullipara, aged 36, had a large tumour in the upper right wall of the uterus (see photograph, Fig. 3, taken on Dec. 11th, 1895, and Fig. 4).

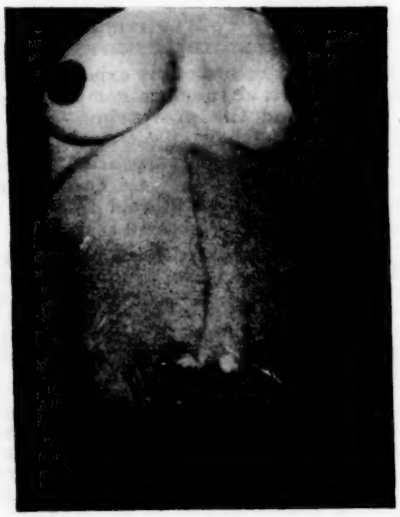

FIG. 3.—Case 12. Showing tumour larger than an adult head on right side of fundus; excessive pigmentation of abdominal wall and areolæ.

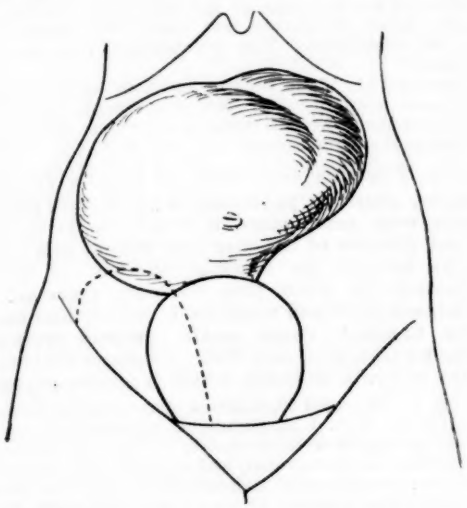

FIG. 4.—Same case as Fig. 3, immediately after labour. The dotted line shows distended bladder.

She had a slightly contracted pelvis, the diagonal conjugata being 4½ inches. On this account labour was induced by bougies and the patient was delivered naturally of a child weighing 8 lb. 1¾ oz. on Dec. 15th. Both mother and child recovered.

PATHOLOGICAL CONDITIONS RESULTING FROM TUMOURS.

In the following case, in which a pedunculated reniform tumour was found at the fourth month, rotation had occurred and had been followed by inflammation and probably sepsis.

CASE 16.—Mrs. S., aged 27, a nullipara, was suddenly seized with pain and inflammation on the left side of the abdomen when four months pregnant. A tumour was found on the left side of the body of the uterus, very tender on examination, and was diagnosed as a twisted dermoid. The tumour was removed by abdominal section on May 20th, 1906. There were no adhesions, but there was a little pus around the tumour, which was greatly congested owing to twisting of its pedicle, which was attached just inside the insertion of the left round ligament. The patient progressed fairly well for two days, then had suppression of urine, secreting only 1½ oz. in 16 hours, the urine containing one-third albumin and bile, and she died on the third day.

A post-mortem examination was not obtained and the tumour was not examined for micro-organisms, but the presence of pus shows that it was probably infected, and I think that death was probably due to septic thrombosis of the ovarian and renal veins. The tumour was a reniform subperitoneal pedunculated myoma weighing 9 oz. and measuring 11½ × 7 × 5 cm. The raw surface of attachment was at the "hilum." The section showed numerous hæmorrhages into the tumour and green patches near the surface. There was a small tag of lymph on the surface (U.C.H., Gyn. Cat. 1911, No. 270).

Intestinal Obstruction.

CASE 18.—M. R., aged 33 (children 0, abortion 0), married four months, in good health, was seen by me on Sept. 21st, 1908. She had last menstruated on July 19th–25th. She had several subperitoneal fibroids, which reached an inch above the umbilicus, and one, as big as an apple, behind the cervix of the uterus, which appeared to be two months pregnant. I advised that she should be carefully watched, and have Cæsarean section at term. Ten days later, in Staffordshire, she had an attack of intestinal obstruction, which, after eight days, was operated upon (supravaginal hysterectomy) by Mr. Spanton (see Proc. Roy. Soc. Med., Obs. and Gyn. Sect., Vol. II., p. 87). It was found that a loop of ileum had become gripped in the sulcus between the large subperitoneal tumours. This sulcus was evident when I saw the patient, and is noted in the diagram taken at the time; but its potential danger was not realised. The patient unfortunately did not recover.

Acute Anteflexion.

Acute anteflexion (resulting from the fixing of the stump of the fundus to the lower abdominal wall) was met with once (Case 21).

CASE 21.—F., aged 24, had the fundus of the uterus, with a fibroid weighing 4 lb. 9 oz., removed on Feb. 26th, 1895 (see Obstet. Soc. Trans., Vol. XL., p. 228), the pedicle being treated extraperitoneally by the serre-nœud and causing a ventro-fixation. The patient having married and become pregnant, the development of the uterus could only take place at the expense of the posterior wall, an acute anteflexion of the pregnant organ resulting. Cæsarean section was performed on Jan. 13th, 1903. The mother made a good recovery: the child also was strong and healthy, but lost its life from hæmorrhage from the cord owing to a badly tied ligature.

Retroversion and Retroflexion.

The next two cases are examples of retroversion and retroflexion of the pregnant myomatous uterus.

CASE 23.—In the second case a fibroid nearly as big as an orange was felt in the pelvis, and above it the retroverted uterus, pregnant nearly two months. The uterus was replaced, and the myoma was then found to be attached to the left corner of the body; it must, therefore, have twisted the uterus through 90°. The pregnancy continued normally and terminated in the birth of a living boy on Jan. 4th, 1920.

CASE 24.—The third case[1] was one of acute retroflexion of the uterus, produced by an adherent fundal myoma (Table C, No. 3). The noteworthy feature of this case was the bulging and thinning of the lower anterior segment, owing to the distension of the uterus having taken place at the expense of the anterior wall. Similar cases have been published by Herman[2] and Varnier and Delbet.[3] Herman's case, treated by Porro's operation, terminated fatally: the other two mothers recovered. In all three cases the death of the child before the operation was undertaken points to the necessity of operating before labour sets in.

Inversion of the Uterus.

CASES 25 and 26.—These were instances of fibroids causing inversion of the uterus after abortion and labour. The tumours were successfully enucleated and the uterus replaced. They are being published in the Proc. Roy. Soc. Med., Obs. and Gyn. Sect., for this year (Vol. XIII.).

Degeneration and Infection of a Fibroid.

CASE 30 (Table B, No. 5).—A. S., aged 42, married, children 0, abortion 1 (December, 1914). She was married in 1904 and had been an in-patient on Dec. 17th, 1914, at U.C.H. for incomplete miscarriage of about nine weeks, brought on by the use of abortefacients. The retained decidua was putrid, and on removing it an intramural myoma as large as an orange was found in the anterior wall of the uterus. Bleeding was profuse, but she recovered well, though the temperature was raised to 100° on three occasions up to the ninth day, and up to 99·6° on the twelfth day; the pulse also varied from 80 to 96. She was advised if she became pregnant again to come to the hospital for Cæsarean section. Accordingly she was admitted to U.C.H. on Feb. 21st, 1917, in good condition and near term. The child was lying obliquely with the head below displaced to the left by the fibroid, which was felt in the lower segment, more on the right side than the left, as a softish tumour as big as a large orange which came down into the pelvic brim. Two other small fibroids were felt in the body. The pelvic measurements were normal. The temperature was 99·4° on admission, but afterwards till the operation only twice reached 99°; the pulse varied between 88 and 104 (on admission 120). Cæsarean section was performed on March 1st, 1917, at 1.30 P.M.

The patient had had slight pains all night and strong pains after midday. The abdomen showed a marked prominence above the pubes, which looked like the distended bladder, but felt thicker walled. It was prominent, but felt soft and fleshy when the uterus contracted; in the intervals between the contractions it felt of the same consistence as the rest of the uterus. The incision did not extend to the fibroid, which was not encroached upon. The child survived. The operation lasted 52 minutes. A submucous myoma as big as a walnut, to which the placenta had been attached and which had been felt on abdominal palpation, was excised. The patient suffered severely from shock, although she had no pain and said she felt well; the pulse and temperature rose to 100; 13½ hours after the operation she had a rigor, with very rapid pulse. On the second day temperature 101°, pulse 120 to 166. She died 60 hours after the operation, obviously from acute sepsis.

Post-mortem.—The abdomen was distended, the abdominal wound healthy. Free fluid present in the peritoneum and a few flakes of lymph. Bowel distended with gas and filmed with pus in places. The deep surface of the wound in the abdominal wall showed early infection. Uterus large and flabby, incision sloughy. The fibroid in the uterine wall felt soft and fluctuating. On opening the preserved uterus the fibroid was found to be of a deep red colour with cavities containing bloody fluid and bubbles of gas in the uterine

[1] Proc. Roy. Soc. Med., Obs. and Gyn. Sect., vol. ii., p. 74, 1909.
[2] New York Journ. of Gyn. and Obs., vol. iii., p. 484, 1893.
[3] Ann. de Gyn., vol. xlvii., p. 102, 1907.

wall as in gas gangrene. The weather was cold and gas was found in many other tissues of the body. The *Bacillus welchii* was found by Dr. Teale in the tumour.

Tumours Giving Rise to Sepsis After Delivery.

The following are three cases selected out of seven in which submucous tumours were removed after childbirth or miscarriage by enucleation through the os uteri:—

CASE 32.—A. C., 35, married, had had one pregnancy resulting in the birth of a living child 11 days before admission on July 21st, 1910. Three days before delivery she began to pass large clots, and on the day before delivery she had a severe attack of hæmorrhage (placenta prævia). Version was performed and a living

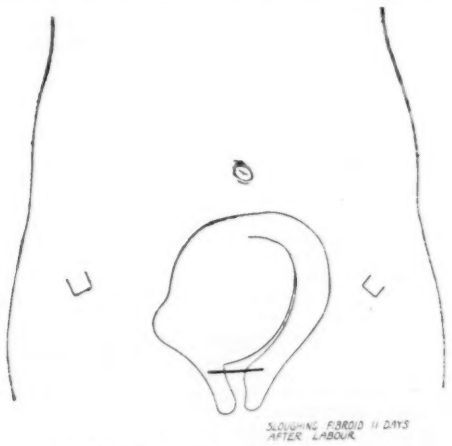

FIG. 5.—Case 32, showing submucous fibroid.

child delivered. During the following week she had several attacks of shivering with high temperature (104°). I saw her in consultation on the eleventh day, found the uterus large and hard, reaching 8 inches above the pubes. A submucous fibroid, as big as a fist, could be felt on the right side per os. (See Fig. 5.) An offensive bloody discharge was present. Vaginal douches of iodine solution were given, and on July 30th the cervix was dilated by Hegar's dilators and the fingers. The tumour was seized with Doyen's cutting forceps and removed in pieces; the base was very adherent, and in pulling on it the uterus was inverted. This enabled the remains of the tumour to be completely removed. The cavity was then swabbed with iodine solution (5i to Oj) and the uterus replaced. Iodoform gauze was packed in the uterus for a few hours. The tumour weighed 1 lb. 3½ oz. It was dull red in colour and in parts was covered with a yellow-green slough. The operation lasted 35 minutes. The temperature, which had varied from 104° to 100° before the operation, reached 100·8°, 100·8°, 101·6°, 103° in the first four days, then gradually fell to normal. The patient left the hospital on August 18th, 1910, and wrote seven months later to say that she was quite well.

CASE 35.—On Oct. 24th, 1898, at 11 P.M., I saw, with Dr. Webb, of Netley, Mrs. F., aged 34, suffering from fever (temperature 100°, pulse 120) and a foul discharge after a miscarriage which had occurred six days previously at the second month. A consultation had been held with local doctors and the finger had been passed into the uterus, the lining of which was smooth. The origin of the foul discharge was not discovered. Under chloroform I introduced my finger and found the smooth condition of the lower uterine canal, but I also felt bulging into the cavity a sessile submucous myoma as big as a walnut; above this, which acted as a ball-valve, some putrid decidua could be touched. I enucleated the myoma, removed a mass of putrid decidua, and washed out the uterus with 1 in 3000 perchloride of mercury solution. The temperature fell to normal, and the patient recovered perfectly. I attended her subsequently in her confinement on Dec. 23rd, 1901, which was quite normal; she also had a second child without any difficulty. She remained in good health till 1917, when she began to lose considerably, and the abdomen increased in size. She became cachectic. I saw her, in consultation with Dr. J. B. Blaikie and Sir Thomas Barlow, on Oct. 5th, 1917. She had a large, fixed, irregular, uterine tumour, nearly filling the abdomen, especially on the left side. She had also pleural effusion and hæmoptysis and other signs of growth in the lungs. From the cachectic condition, the hæmorrhages, and foul discharge it appeared probable that the growth was a uterine sarcoma.

She gradually wasted and died in February, 1918, nearly 20 years after the enucleation of the fibroid.

CASE 37.—F. R., aged 31, married at 24; two children, one delivered with forceps 13 months after marriage, and a second at the age of 28, since when menstruation had been profuse and very painful, lasting seven days. She had had bearing down and prolapse of the uterus since the first child was born. Menstruation began at the age of 12, was regular, lasting two to three days, and moderate.

On admission, July 2nd, 1900, she was bleeding profusely, a result of an early miscarriage on the same day. A tumour as large as a goose's egg could be felt attached by a broad base to the left side of the fundus, and above it on the right was some friable decidua. (See Fig. 6.)

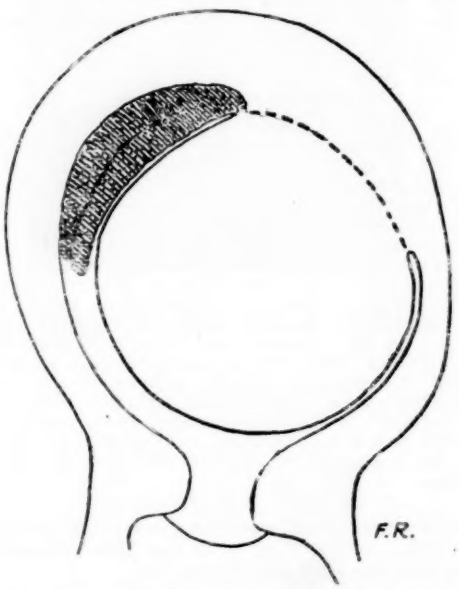

FIG. 6.—Case 37, showing submucous fibroid and decidua.

On July 3rd the tumour was removed by enucleation and the decidua by the finger, and an intra-uterine douche given. The temperature (99·6°) fell practically to normal and remained so till the 14th, when colporrhaphy and perineorrhaphy were performed. The wounds healed well. Fifteen months later, on Oct. 17th, 1901, the patient was delivered of a living child.

FREQUENCY AND AGE-INCIDENCE OF FIBROIDS.

Fibroid tumours complicating pregnancy are quite common, though very divergent opinions have been expressed by eminent obstetricians on this point. Thus, Landau states that in the Charité, amongst 19,052 labours fibroids were found only six times, and Schauta, in 55,311 pregnancies, found only 54 cases of myoma. Pinard, in 13,915 pregnancies, found 84 cases of myoma; and Pozzi, in 12,050 pregnancies, found 83. I have no doubt that the French obstetricians' figures most nearly represent the frequency with which this complication is

diagnosed, but necessarily somewhat under-estimate the actual frequency, owing to small or inaccessible tumours escaping observation. I think it may be stated with approximate accuracy that fibroids occur about once in 150 pregnancies.

Bayle, in 1813, wrote that "fibroids scarcely ever appeared before the age of 30 years," but were present in nearly every woman over 40 years who had preserved the physical signs of virginity; and Virchow gave it as his experience that he had examined the corpses of few old virgins in which fibroids were not found, although in many women who had borne children the uterus remained free from them even in extreme old age.

It is now known that fibroids occur, though rarely, before the age of 25 years, and are practically unknown before puberty.[4]

In view of the slow growth of these tumours, of their occasional occurrence at an early age, and their production of severe dysmenorrhœa years before they become manifest clinically, it has been suggested that fibroids are of congenital origin. Essen-Möller has examined the uteri of 20 fœtuses and sucklings, and I have examined the uteri of 100 stillborn girls, without finding any signs of myoma.

Taking the ordinary period of woman's fertility at 30 years, the fact that in the first 10 years she may become pregnant, but is extremely unlikely to have a fibroid, and only in the next 20 years is liable to have both, invalidates most of the voluvoluminous statistics of sterility and abortion in women with fibroid, into which I shall not enter here.[5] There is no doubt that fibroids have a certain influence in causing sterility and abortion, but it is a slight one. Hofmeier is even of opinion that they *increase* fertility, but his statistics are not convincing. On the other hand, there seems to be reason to believe that sterility favours the occurrence of fibroids, and that regular childbearing and suckling prevent, to some extent, their occurrence (Bayle, Virchow, Pinard).

EFFECT OF PREGNANCY ON FIBROIDS.

When a patient with fibroids becomes pregnant the tumours usually increase in size from œdema, hypertrophy, and hyperplasia; the muscle cells become greatly hypertrophied, often swollen, sometimes vacuolated, and occasionally developed into large cells resembling the decidual cells of the endometrium (Gordon Ley). The tumours vary in their development; they usually enlarge. Sometimes no increase is noticeable; occasionally they appear to diminish and their shape is apt to become flatter and their consistence softer than in the unimpregnated organ. They may become more prominent as pregnancy proceeds and alter their shape to clinical examination, owing to change in their location or axes. They may become fixed by impaction in the pelvis or by inflammation resulting from mucous degeneration, necrobiosis, or infection. The necrobiotic fibroid is either grey or pinkish grey or red (usually of a dusky tinge)—the so-called "red degeneration," which is not confined to pregnant uteri, and in my experience is quite as common in the unimpregnated. Degeneration of the fibroid is sometimes accompanied by degeneration of the uterine muscle, which may be more markedly affected than the tumour cells. The degenerated fibroid may be sterile or may be infected, and occasionally suppurates, especially in the puerperium. It would appear that the degenerated or cystic fibroid forms a good cultivating medium for micro-organisms which may be dormant during the pregnancy. I have found an abscess containing a pure culture of streptococci in the centre of a fibroid in a virgin, who gave no clinical sign of its presence except a cachectic appearance. It seems then, that infection of degenerated fibroids may occur from the blood stream; the ordinary route of infection per vaginam often leads to necrosis of submucous tumours, examples of which have been given. Calcification sometimes occurs in fibroids complicating pregnancy, whether the tumours are of uterine or ovarian origin. *After labour* the tumours usually diminish in size and may alter in shape, owing to their rearrangement in the emptied organ. The subperitoneal tumours sometimes do not diminish very markedly in the puerperal month. Their apparent rapid diminution is rather due to increased difficulty of examination. They sometimes undergo very rapid involution, as in Lorain's[6] case, where a tumour, easily felt, as big as the head of an eight-month fœtus at the time of labour, was found post mortem to have diminished on the twenty-second day to the size of a hazel-nut.

As fibroids undoubtedly in some cases undergo great diminution, they are supposed occasionally to disappear after labour. Olshausen's cautious opinion is that it is "not altogether impossible."

In view of the occurrence of rupture of cystic fibroids in the unimpregnated, of which I have seen an example, it is remarkable that there does not appear to be recorded a case of rupture of the pregnant uterus before the onset of labour. Rupture of veins with intraperitoneal hæmorrhage is very rare (Gusserow, Schmorl, L. Meyer, Hamilton, quoted by Troell). The two cases I have met with occurred in nulligravidæ.

Torsion of pedunculated tumours sometimes occurs (Case 16, Table C, No. 2); it is especially liable to happen in the kidney-shaped tumours with pedicle at the hilum (Case 16, and Ribemont-Dessaignes and Grosse's case, quoted by Troell). It is a dangerous accident, 3 out of 21 cases collected by Troell and 1 out of my 3 cases having terminated fatally. This torsion may be transmitted to the uterus and even to the vagina. Troell gives a list of 21 cases of torsion of the pregnant uterus produced by fibroids.

EFFECTS OF FIBROIDS ON PREGNANCY.

Ectopic pregnancy is rarely met with (Table C, No. 2). In 1886 Gusserow could only find two cases recorded. The specimen from one of these is in the Museum of U.C.H., the case published by Harley in the first volume of the Obstetrical Transactions, which Mr. Lawrence and I, in preparing the Gynæcological Catalogue of U.C.H. Museum (1911), found to be a ruptured uterine horn, and not a ruptured tube, as described. Troell, in 1910, found 49 cases of tubal pregnancy recorded in literature, but Harley's case should be excluded. I am able to add a second specimen from U.C.H. Museum, sent to me by Mr. Bates.

Placenta prævia is said to occur with unusual frequency with uterine fibroids (Case 32). It is probable that hæmorrhages due to submucous fibroids, or to the insertion of the placenta upon them, are sometimes erroneously attributed to

[4] See H. R. Spencer, Obstet. Soc. Trans., vol xl., p. 228.
[5] See Troell; Studien über das Uterusmyom in seinen Beziehungen zu Konzeption, Schwangerschaft, Geburt und Wochenbett, 1910.
[6] Gaz. des hôp., 1869, No. 92, p. 361.

placenta prævia. In Case 30 the placenta was situated over a submucous tumour, but gave rise to no hæmorrhage during the pregnancy; the hæmorrhage in such a case may, however, lead to the discovery of the tumour (Case 31).

While abortion, except in the case of submucous tumours, does not appear to occur with much greater frequency than in normal uteri, both pre-mature and post-mature labour are apt to occur.

Pain or tenderness over the tumour or uterus are frequent symptoms, especially in necrobiotic tumours. The pain is usually easily relieved by rest, light diet, and anodynes. The "unbearable pain," which some authorities have given as a justification for performing hysterectomy in early pregnancy, I have never met with. In cases of torsion, or inflammation, or infection of the tumour, the symptoms are acute, and require prompt surgical interference. Pressure by the tumour on the veins may cause œdema of the lower limbs; albuminuria is not uncommon, and ascites may occur (Table C, No. 2; also Landau's case). Abnormal (especially breech) presentations are frequently met with. The labour is often surprisingly easy in view of the advanced age of many of the patients (Cases 2, 5, 6, 7). Even in the case of tumours encroaching on the brim it is found that the tumour is often drawn out of the way during labour. In some cases forceps may be required for inertia. Retention or incarceration of the placenta or decidua may occur (Cases 31, 35, 37), and post-partum hæmorrhage in cases where the submucous tumours are present may be severe. On the whole, in cases suitable for delivery per vias naturales the labour is often normal, even when the tumours in the upper part of the uterus are quite large. In cases, however, where injudicious attempts are made to deliver the child by forceps or version past tumours even of small size, dangerous bruising of the tumours, or even rupture of the uterus, may occur.

DIAGNOSIS.

The diagnosis of pregnancy and of fibroids sometimes presents difficulties, which are increased when the two are combined. It is more likely that a mistake will be made over the pregnancy than the fibroid. In the first half of pregnancy the great factors in the diagnosis are the suppression of the menses, even if only for a few days, and a uterus larger than it should be and irregular in shape, the irregularities being hard. A uterus may be irregular from pregnancy in one cornu—a lop-sided uterus—but it has the normal consistence; when it contracts and becomes hard it assumes the normal shape. If the pregnancy is advanced to the second or third month the softness of the cervix and body are characteristic, the latter being sometimes best felt per rectum.

In the early months the points to bear in mind are the cessation of menstruation, the rapid growth of the tumour, the consistence of the uterus, and the hard irregularities upon it.

In the second half of pregnancy, when the "certain" signs (heart sounds, parts or movements of the child, and ballottement) are available, difficulties sometimes are met with. In very rare cases, of which I have seen only two or three instances, the uterus remains as hard as a fibroid throughout pregnancy, and is not subject to those periodical relaxations and contractions which ordinarily characterise it. On the other hand, a degenerated fibroid uterus, by its consistence and livid appearance, may closely simulate a pregnant uterus with its contained fœtus, but, of course, the certain signs and the breast changes are absent; menstruation is usually excessive, and I believe the bulging of the anterior lower segment, which is sometimes seen in the case of fibroids, is never met with in normal pregnancy, though it may be found extremely marked in retroflexion of the pregnant uterus, produced by fibroid of the fundus adherent in the pelvis (Case 24). When there are irregularities on the surface of the pregnant uterus the diagnosis is simplified; the prominences are hard, the pregnant uterus soft and contractile; the fibroids do not alter their position, as parts of the fœtus do, and they may become more marked during uterine contractions, which obscure the fœtal parts; at most, the tumours have a slight mobility, but return to the same position even when repeatedly examined. Large subperitoneal or intramural growths, or small multiple growths, may render the palpation of the fœtus difficult till the pregnancy is somewhat advanced.

If the fibroids are degenerated they may feel softer than the rest of the uterus when the latter contracts (Case 30). When cystic and of large size they are difficult to distinguish from ovarian tumours (Case 15); the same difficulty may occur in diagnosing twisted fibroids in the acute stage, though the hardness will be in favour of uterine fibroid, and the age of the patient may assist the diagnosis.

In all cases of difficulty, especially with impacted or inflamed tumours, examination under anæsthesia is of the greatest value. I need only allude to the resemblance of a horn of a double uterus to a fibroid, for which it has been mistaken, and has led to the sacrifice of the uterus when excision or even replacement of the horn would have sufficed.

Diagnosis in the Puerperium.

After the birth of the child the diagnosis of subperitoneal and intramural tumours is usually easy, owing to the lax state of the abdominal wall and the smaller size of the uterus. Submucous tumours may be overlooked, unless they give rise to hæmorrhage or to fever from necrosis or gangrene. If the uterus is large and hard in the puerperium a submucous fibroid should be suspected and the uterus should be explored. Fever may arise either from retention of the products of conception or from infection of the tumour, especially if it has undergone degeneration. A tender subperitoneal tumour in the puerperium associated with fever will suggest infection. I have known a large intramural tumour mistaken for a second twin; in that case the hardness of the tumour and the absence of signs of the fœtus rendered the diagnosis easy, but if the tumours were degenerated considerable difficulty might arise, which would be overcome by exploration through the cervix.

A fibroid impacted in the pelvis, especially if it is cystic (Case 27), may closely resemble an ovarian cyst, and a subperitoneal fibroid, after abortion, may resemble a tubal mole, from which its hardness distinguishes it. Inversion of the uterus is met with, usually some weeks or months after labour or abortion. In addition to the usual signs of inversion, there will be a tumour, usually separated by a groove and distinguishable from the uterus by its harder consistence. A case of mine in which these two points of distinction were absent is, so far as I know, unique.[7]

[7] See Proc. Roy. Soc. Med., Obs. and Gyn. Sect., vol. xiii.

PROGNOSIS AND TREATMENT.

The prognosis is, in the great majority of cases' good when the patients are attended with judgment and careful regard for asepsis. The three fatal cases here published, which are all that I have met with, are examples of dangers which sometimes arise. The first death (Case 18) from intestinal obstruction, due to nipping of the ileum between two subperitoneal fibroids, is a very rare accident, of which I have not been able to find another example. The other two deaths (Cases 16 and 30) suggest the necessity of bacteriological examination of the tumour before resorting to conservative abdominal operations.

The great majority of cases require only careful supervision during pregnancy, periodical examination of the urine, and rest, mild aperients, and anodynes if the tumours become painful. Induction of abortion and premature labour and forcible delivery past obstructing tumours are contraindicated. Forceps may be required for inertia, but should never be used to overcome resistance caused by tumours. Craniotomy and embryotomy are called for only in cases where the fœtus is dead and the mother not infected. Polypi and pedunculated subperitoneal tumours should be removed.

Vaginal myomectomy may be required for cervical fibroids, but should not be performed for retrocervical tumours.

Abdominal myomectomy is rarely needed, and usually only for very large or twisted or necrobiotic tumours. It not infrequently leads to abortion and to hysterectomy in order to stop the hæmorrhage from the bed of the tumour, and it often fails to remove all the tumours present in the uterus. Before performing myomectomy, as also before conservative Cæsarean section, the tumour should be examined bacteriologically, and if it is infected the whole uterus should be removed.

Hysterectomy during early pregnancy, in the absence of hæmorrhage or infection, is rarely called for. Myomectomy and hysterectomy in early pregnancy are frequently performed by some gynæcologists.

Thus, T. Landau[8]—who has written an important monograph on the subject of myoma and pregnancy, illustrated by many fine plates of fibroid uteri

[8] T. Landau: "Myom. bei Schwangerschaft, Geburt, und Wochenbett, 1910.

TABLE A.—*Author's Cases of Pregnancy Complicated by Fibroids Treated by Abdominal Myomectomy.*

No.	Initials.	Age.	Children.	Abortion.	Duration in minutes.	Date of operation.	Drainage.	Adhesions.	Recovery.		Tumour.	Remarks.
									Mother	Child		
1	B.	41	4	0	63	July 5, 1901	Gauze to broad ligament.	To omentum and broad ligament.	Yes.	No.*	Cystic myoma 1 foot in diameter, solid part over 17 lb., and several pints of fluid.	Operation during labour (see Obstet. Soc. Trans., vol. xlvi., p. 122). (Case 15.)
2	M. S.	30	0	0	54	March 5, 1906	No.	To omentum	,,	—	Pedunculated twisted reniform tumour attached by hilum just internal to right round ligament 11·5 × 9 × 5 cm., vascular, degenerated adhesions on surface.	Operation 3 weeks after abortion at 5th or 6th week. (Case 17.)
3	S.	27	0	0	55	March 20, 1906	,,	No.	No.	—	Pedunculated twisted reniform tumour attached by hilum just internal to left round ligament. Tumour 9 oz., 11·5 × 7 × 5 cm., hæmorrhage into it, pus around it.	Operation at 4th month of pregnancy. Patient died on 3rd day with suppression of urine, probably from septic thrombosis of ovarian and renal veins. (Case 16.)
4	K. B.	26	0	0	60	Nov. 11, 1911	,,	To omentum	Yes.	Yes.	1 lb. 1 oz., 7·5 cm. in diameter, pedicle 3·7 cm. thick, lymph on surface; necrobiotic; sterile.	Operation at 11th week of pregnancy. Child 7 lb. 15½ oz., born 272 days after marriage; vertex presentation. (Case 14.)
5	A. I.	29	2	0	74	July 25, 1313	,,	To omentum and abdominal wall at navel.	,,	,,	3¾ oz., 7·5 × 5 × 4·5 cm., calcified and degenerated.	Operation at 6th week of pregnancy. Child 6 lb. 10 oz., delivered naturally; vertex presentation March 10th, 1914. (Case 13.)

* Dead before operation.

TABLE B.—*Author's Cases of Pregnancy Complicated by Fibroids Treated by Conservative Cæsarean Section.*

No.	Initial.	Age.	Children.	Abortion.	Duration in minutes.	Date of operation.	Drainage.	Adhesions.	Recovery.		Fibroid removed.	Remarks.
									Mother	Child		
1	C.	34	0 (married 5 years)	0	58	March 1, 1907	No.	No.	Yes.	Yes.	No.	Fibroid size of lemon in left lower segment; generally contracted pelvis; healed tubercle of sacro-iliac joints and pelvis.
2	A.	31	2	0	43	Jan. 8, 1916	,,	,,	,,	,,	,,	Fibroid size of grape right upper anterior wall; contracted pelvis. Several small fibroids found on Dec. 14th, 1918, when Cæsarean section successfully done for the 4th time.—(H. R. S.)
3	S.	42	0	1	52	March 1, 1917	,,	,,	No.	,,	,,*	Degenerated infected myoma of lower segment. *Bacillus welchii* in tumour. Patient died of acute sepsis in 60 hours. (Case 30.)
4	B.	25	0	0	40	March 17, 1917	,,	,,	Yes.	,,	,,	Pelvis contracted (3½-inch conj. vera); two fibroids size of grape and marble at back of uterus.
5	M.	38	1 (dead; forceps)	1	60	Feb. 8, 1918	,,	,,	,,	,,	,,	Pelvis contracted (3½-inch conj. vera); one child delivered dead with forceps (difficult); small fibroid in anterior wall.

* A small submucous tumour removed.

TABLE C.—*Author's Cases of Pregnancy Complicated by Fibroids Treated by Cæsarean Section followed by Abdominal Hysterectomy.*

No.	Initials	Age.	Children.	Abortion.	Duration in minutes.	Date of operation.	Drainage.	Adhesions.	Recovery. Mother	Recovery. Child	Nature of operation.	Remarks.
1	A. D.	28	0	1	51	May 14, 1892	No.	No.	Yes	Yes	Porro's operation (299 days after last menstruation).	(See Obstet. Soc. Trans., vol. xxxviii., p. 390.) Breech presentation. Labour obstructed by cervical fibroids. Mother quite well in 1914; the daughter, 5 ft. 10 in. in height, well developed, recently married. Uterus weighed 6 lb.
2	B.	28	0 (married 5 years)	0	75	March 18, 1905	,,	A few around ruptured tube (ectopic gestation.)	,,	,,	Cæsarean section + total abdominal hysterectomy.	(See Obstet. Soc. Trans., vol. xlviii., p. 240.) Patient in labour. Footling presentation; membranes ruptured 8 hours; urine highly albuminous; ascites. Uterus 6 lb. 2 oz.
3	M. A. N.	38	0	0	58	March 29, 1908	,,	Of pedunculated fibroid to Douglas.	,,	No†		(See Proc. Roy. Soc. Med., Obs. and Gyn. Section, vol. ii., p. 74.) Breech presentation. Operation for retroflexion of uterus by fundal fibroid adherent in Douglas's pouch; uterus 5 lb. 12½ oz. (with placenta). Operated on for spindle-cell sarcoma of left ovary, May 20th, 1919.
4	S. R.	37	3	1*	55	July 10, 1909	,,	No.	,,	Yes		(See Proc. Roy. Soc. Med., Obs. and Gyn. Section, vol. iii., p. 82.) Head presentation. Operation for painful fibroids and contracted pelvis. Difficult labour, last 10 years before; 1 child imbecile, injured by forceps. Uterus 2 lb. 14 oz., posterior wall 2 in. thick; hyaline degeneration of uterine muscle and fibroids.
5	C.	40	0 (married 9 years)	0	90	Oct. 12, 1914	,,	,,	,,	,,		Operation for painful fibroids and contracted pelvis. Fibroids in posterior lower segment in pelvis, but had risen at operation. Patient anxious for living child. In labour 3 hours; head presentation. (Case 29.)
6	M. E.	42	0 (married 3 years)	0	54	Sept. 30, 1916	,,	,,	,,	,,		Operation for fibroids and contracted pelvis; head presentation. Conjugata vera 3½ in. Fibroid 3¾ in. in diameter, 2⅜ in. thick in lower segment to level of internal os. Mother and child well in 1919. Case 28.)

* Induced at 6½ months. † Dead before operation.

taining little fœtuses sacrificed in some cases, it appears to me, unnecessarily by the operation of hysterectomy—gives a list of 11 cases of abdominal myomectomy during pregnancy, apparently operated upon by his brother and himself. All the patients recovered and only one aborted. A careful reading of the history of the cases leaves a doubt as to whether the operation was in all necessary or advisable.

Landau also gives a list of 19 cases in which hysterectomy was performed in the early months of pregnancy; in some of the cases the pregnancy was not diagnosed before the operation; in others, what was intended to be a myomectomy terminated in hysterectomy; one of the mothers died; the others were, of course, sterilised, and the children sacrificed. The practice of hysterectomy in the early months of pregnancy is, in my opinion, much too common both abroad and in this country; I have never found it necessary.

In Table A are given my cases of abdominal myomectomy during pregnancy. Of the mothers, four recovered and one died (undelivered) at the fourth month of pregnancy. In No. 1 the child was dead at the time of the operation. In No. 2 abortion occurred before the operation. In Nos. 4 and 5, operated on at the eleventh and sixth week, the pregnancy continued and living children were born.

Every endeavour should be made to enable pregnancy to be carried on until the child is viable, when a conservative or radical Cæsarean section may be performed.

Conservative Cæsarean Section (Table B).

This is rarely indicated by the fibroids alone, but may be performed when fibroids are associated with contracted pelvis or malpresentations of the child, especially in elderly primiparæ. In the case of a single myoma it might be possible to remove the myoma and child through the same incision. Landau, who removed the uterus 19 times during early pregnancy, does not record a case of conservative Cæsarean section.

My five cases are given in Table B. In all contraction of the pelvis and the presence of fibroids were the indications for the operation. The five children survived; one mother died owing to my failure to discover the infection of the tumour. The case should have been treated by total abdominal hysterectomy.

Cæsarean Section Followed by Abdominal Hysterectomy (Table C).

Landau performed the operation in two cases only; the mothers and one child recovered; of the other child it is stated that it was a well-developed boy, but whether it survived or not is not mentioned. My six cases are given in Table C. All the mothers recovered, and all the children survived except one, which was dead before the operation was performed. Total hysterectomy, which was performed in five of the cases, is, in my opinion, preferable to amputation in pregnant as in non-pregnant cases, especially as it provides drainage and removes the possibly infected cervix.

Troell gives a list of 20 cases (including 2 of mine) operated on since 1900, with 2 deaths. I am able to add 3 more cases (Table C, Nos. 4, 5, 6), making 23 cases with 2 deaths.

In the puerperium vaginal myomectomy is usually the best treatment for submucous tumours, even when they are infected or invert the uterus. It should usually be tried before resorting to hysterectomy, which I have never found to be necessary. In infected subperitoneal or intramural tumours total abdominal hysterectomy should be performed.

Presidential Address
ON
SURGERY DURING THE WAR.

Delivered before the Medical Society of London.

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GENTLEMEN,—He would indeed be singularly wanting in imagination who could occupy this chair without feeling a grave sense of responsibility at being entrusted, even for a year, with the guidance of the affairs of this old society. Among my predecessors have been many able men, some very eminent and some, I am glad to think, very ordinary. Genius, while it adorns such a position as this, is not really essential. All have, however, resembled each other in doing their best in the interests of the Medical Society, and in this it will be my humble endeavour to imitate them.

I am particularly lost in admiration of my four immediate predecessors, who, during the chaos of the last five years, have maintained, and at times have even excelled, the high standard of interest which has ever been the feature of the meetings of the Medical Society of London. This, I think I can say without fear of contradiction, has been a feat unique in London, and, so far as I can judge, in the provinces. That this has been due to the energy of our Presidents, of our secretaries, and of our registrar is undeniable, but I would also suggest that the peculiarly catholic composition of the meetings of this society may also have been a contributory factor. Here practitioners of medicine in the widest sense of the term meet to discuss problems of mutual interest, and there is no anomaly in the Medical Society having as its President a laryngologist or a surgeon. Discussions at meetings composed entirely of physicians, or entirely of surgeons, or entirely of men interested in one or other of the specialties, tend to become highly technical, and this tendency often develops to such an extent that further fission takes place and coteries are formed to discuss still more technicalities. In a profession so highly technical as ours has become, there can be no denying that such discussions are most necessary, but it must also be remembered that we are all practitioners of medicine in the broad sense of the term, and the side-lights that may be cast on a surgical problem by physicians, or by those interested in other specialties, or vice versa, may do much to preserve that sense of perspective, of which the loss so often mars an otherwise brilliant conception.

I have dwelt, perhaps you may think unnecessarily, on what is an obvious truth, but there are times when to emphasise a point one must labour the obvious. The point I wish to emphasise here is that in this new world, on the threshold of which we are said to be standing, there is a place—there is a need—for this old Medical Society of London. I know of no society which more closely links together all those within its folds, whether they be general practitioners, in the modern sense of the term, physicians, surgeons, or those interested in the various specialties. Probably no body has retained for 150 years so exactly the character intended for it by its founder as has this society retained the impress left on it by Dr. Lettsom. It is for us to see that this heritage survives the present taste for reconstruction. Reconstruction is in the air, it crops up in the most unlikely places. It has not altogether passed us by. An attempt to reconstruct us on bisexual lines, which sent a shiver down the backs of some of our sturdiest, failed, to be followed by a more successful attempt to reconstruct our financial position. Our subscription after being 1 guinea for 146 years has now been doubled—that, alas! is one of the peculiarities of this new world, everything is more expensive. How necessary was this is well set forth in the report of our treasurer, Dr. Mitchell Bruce, to whom this society owes a deep debt of gratitude. Possibly this increased subscription may be responsible for some resignations, but these will be due as probably to the general post in the profession, which is inevitable as the result of a five years' war. It should be our endeavour to see that each of these vacancies is filled up twice over, and that this old society is once more launched forth on another century of usefulness. In this connexion I would remind the Fellows that we have lost by death during the last 12 months 16 of our number. Three of these were old Presidents—Mr. Brudenell Carter, Dr. Frederick Roberts, and Sir William Dalby—all three joined the society in the early "seventies." The society has sustained a serious loss in the untimely death of Dr. Leonard Guthrie, an old colleague of mine, as secretary and later a Vice-President. I had looked forward to seeing Dr. Guthrie in this chair, one of our most distinguished Presidents. We also deplore the loss of Dr. Cahill, Dr. Lovell Drage, Mr. Betham Robinson, Dr. Percy Lush, Dr. Nias, and Dr. Guthrie Rankin, all of whom had served the society on the Council.

THE TREATMENT OF CONTAMINATED WOUNDS.

During the war the papers and discussions were, with few exceptions, on military medicine, surgery, or hygiene, and a study of the last four volumes of the Transactions is to epitomise the various problems that have had to be faced during the last five years. Many of these problems fortunately may not have to be faced again, and much that has been learnt may be cast into "the limbo of half-forgotten things." But from it all will emerge observations, technique, and conceptions which will, I believe, have a far-reaching influence on medicine and surgery, and will occupy the discussions of this and kindred societies for many sessions. It is an interesting exercise to speculate on the value of the various legacies left us by the war, and it is my intention to endeavour to appraise the value of a few of our newly acquired surgical assets as tested by the needs of a civilian population.

In the summer and autumn of 1914 surgeons were made to realise that their influence over the course of a septic wound was remarkably slight. Enormous progress had been made in the prevention of sepsis; so much so that sepsis in any marked degree was seldom seen in ordinary operation wounds or in accidental wounds which had received prompt treatment. Owing to their comparative rarity it was not perhaps completely realised that wounds in which sepsis was well established were practically left to Nature, with the assistance, possibly, of drainage and protection. In Flanders in 1914 such self-deception became no longer possible; practically every wound was septic, and surgery was comparatively helpless. Surgeons

who had hitherto relied on extreme cleanliness fled to chemical antiseptics, and the advocates of antiseptics discarded their old favourites for each new germ-killer which the ingenuity of chemists could suggest. It was about this time that a friend of mine who was doing a good deal of surgery in one of the war zones told me that he derived much assistance and stimulation from reading Guthrie's experiences in the Peninsular War.

Gradually, however, we came back to first principles. It was slowly realised that a contaminated wound is not at first an infected wound, and that the careful excision of contaminated and devitalised tissues was the most important measure of antisepsis. It was also about this period emphasised, though it had long been realised, that bacteriological and surgical asepsis do not coincide, and that a wound is capable of clean healing though in it the bacteriologist might still be able to demonstrate germs. Consequently many of these wounds were sewn up at once; while others were watched for a few days, and, if still uninfected, underwent a secondary suture, with enormous advantage in saving of time and suffering to the wounded men. In the summer of 1915 I was excising wounds in the Dardanelles, but I had not realised the truth of the second proposition and I spoilt my results by excessive drainage, and thereby facilitated subsequent infection.

But, though surgery had thus improved the treatment of the wounded man, and had again proclaimed the eternal truth that the healing of wounds lies in the prevention of sepsis, yet we had not yet learnt how successfully to treat a septic wound when once infection was well established, and this is a question we may well ask ourselves now. The nearest approach to it, in my opinion, is the method of wound treatment known under the name of the Carrel-Dakin. Hypochlorite of soda is not a modern innovation, as it was discovered in 1788, and by its aid Louis XVIII. was, I understand, embalmed. I suppose most surgeons of my age have often employed the liquor sodæ chlorinatæ of the Pharmacopœia for stinking wounds.

Now solutions of hypochlorite are undoubtedly irritating, a quality usually ascribed to the free chlorine, but which was shown by Dakin to be due to free alkalies. By providing for the neutralisation of these alkalies Dakin has provided us with a very serviceable antiseptic. The Carrel-Dakin treatment, however, carries us further than this. Hypochlorite of soda rapidly disappears when in contact with the secretions of the wound. It is conceivable that, in this respect, it resembles other antiseptics; in order, therefore, to obtain its proper effect it should be instilled into wounds continuously or at short intervals. There is an overwhelming mass of evidence from our various war zones as to the efficacy of this method of treatment, and to this I must add my own, though for some time I was undecided between this and the physiological treatment by hypertonic salt solution, as suggested by my colleague, Sir Almroth Wright. Perhaps almost the best testimonial the Carrel-Dakin treatment has had was from my colleague, Alexander Fleming, who, while admitting the efficacy of the treatment, ascribes its success rather to its physiological than to its bacteriological action. Whether this be so or no is probably not yet capable of scientific proof, but every surgeon would welcome some means of controlling and stimulating the physiological defences of the body against sepsis, and it is to such men as Sir Almroth Wright and his co-workers that we shall have to look for help in this direction.

One variety of sepsis has, however, lost some of its terrors. Whatever else this war has achieved it has certainly thoroughly stabilised the reputation of tetanus antitoxin as a prophylactic against tetanus, if administered at a reasonable interval after the infliction of the wound. In fact, its very success has created a new disease, and the existence of localised tetanus of the limbs has now been firmly established. In looking for these cases one has also had opportunities of realising the extraordinary number of cases of hysterical spasm of the extremities which may result from wounds, in some cases even following local tetanus. I cannot do better than to refer you to a most interesting paper by Dr. A. F. Hurst in the *British Journal of Surgery*, in which an account is given of a number of these cases and of their successful treatment, not by psycho-analysis nor by hypnosis, but by explanation, persuasion, and re-education.

MODERN VIEW ON SHOCK.

Never, perhaps, have experimental physiologists and clinicians had a more fruitful field and a better opportunity of research than have the Special Investigation Committee appointed by the Medical Research Committee to undertake the coördination of inquiries into surgical shock and allied conditions, and the green pamphlets of the Medical Research Committee are worthy of and require the most careful consideration of every surgeon.

In 1914 the current view of the cause of the failure of the circulation in shock was that enunciated by Crile, that it was due to exhaustion of the vaso-motor centres by excessive sensory stimulation, and that the blood accumulated in the great veins of the splanchnic area. It was always a stumbling block to this view that practical surgeons could never be certain of this accumulation of blood when performing hurried laparotomies on shocked patients. New conceptions now hold the field, and while excessive sensory stimulations may be a contributing factor, the most potent agents in the reduction of blood pressure are probably toxic substances produced by the damage to the tissues, particularly to muscles. The blood stagnates, not in the splanchnic area, but in the capillary network, owing to the general loss of the normal tone of the capillary walls. There is much experimental work and clinical observation in favour of these views, and the shock produced in cats by the injection of the substance histamine is a very suggestive analogy.

By a very ingenious method of injecting a non-toxic, non-diffusible, dye-substance—vital red—into the blood stream and estimating its dilution N. M. Keith has shown that the shocked man has a reduced blood volume, and that his power of recovery is largely connected with the power of the circulation to take up fluids from the tissues or to retain added fluids. The reduced blood volume in simple shock is probably due to the transudation of plasma through the abnormally permeable capillary walls. It is suggested that these effects are produced not so much by the exhaustion of the nervous control as by the presence in the circulation of certain cleavage products of protein acting as chemical messengers or hormones. To use a simile of Professor A. Keith's, there is not only a telegraphic and telephonic inter-communication via the nerve fibres in the body, but there is also a postal system, and the tissues are influenced

by missives arriving in the blood stream. The presence of adrenalin in the circulating blood of frightened cats, as shown by Cannon and also by Elliott, is a hint that shock from emotional stress has a similar causation. These considerations open up another chapter in the study of the modern theory of hormones, substances which Professor Keith has suggested are possibly even responsible for our racial characteristics. There is nothing startlingly new in the treatment of shock, but our knowledge has become more systematised and we have shed certain superfluities. Rest and warmth still occupy the chief place; stimulants and drugs, except small doses of morphia, have been discarded. Gas and oxygen are even more firmly established as the anæsthetic of choice where local anæsthesia is not convenient. Most important is the free administration of fluids by mouth or by rectum, or, if the shock be more profound, intravenously. Here, however, is a difference. Normal saline, whether subcutaneously or intravenously, has been discarded, and for it has been substituted either Bayliss's gum saline solution or blood. There is still some controversy as to which of these two is the more efficacious, and it is possible that the fact that a large proportion of the shock cases in France were also cases of hæmorrhage may have given an undue advantage to the transfusion of blood. Robertson's technique of indirect transfusion of citrated blood was that usually employed, and will be a useful addition to the equipment of our operating theatres. It must, however, be borne in mind that as operating surgeons in civil life we are, perhaps, more concerned in the prevention of shock than in its cure; but in connexion with the large industrial centres resuscitation wards will be as necessary as they were in the casualty clearing stations in France, only let us hope they will not be so busily employed.

The excision of the contaminated and devitalised tissues of the wound wall, as the prime measure of antisepsis, influenced the surgery of every part of the body. In head injuries Cushing and his followers excised the scalp wound and also the wound of the skull en bloc, sucked out the debris in the wound track through a soft catheter, and occasionally successfully removed the foreign body by means of a small iron rod (usually a French wire nail) attached to a powerful magnet. What, perhaps, is a useful fact for future guidance is that the majority of these operations were performed under novocain.

ABDOMINAL SURGERY IN TWO WARS.

Abdominal surgery, after suffering somewhat from the conservatism of the South African War, was resuscitated by the efforts of, among others, an old secretary of this society, Sir Cuthbert Wallace, and many feet of injured intestine were successfully excised by many operators from patients who would otherwise have died miserably. Perforated viscera were mended and bleeding vessels were ligatured. That this was possible was due largely to the peculiar immobility of the fighting zone in the late war, and also to the fact that the army adopted, what has always been a feature of civil hospitals—namely, the principle of team-work. The term "team" in this connexion may be new. I think in London the expression "firm" was not uncommon, but under whatever title the principle was well established that a surgeon and his assistants should be associated together for at least some months, and in many cases longer. This is what was attained in the casualty clearing stations in France, but on a scale hitherto undreamt of in civil or military experience, and it says much for the organising energy of those who initiated it. In the Dardanelles, owing to the peculiar nature of the front, we were able to bring our hospital ships up even closer behind the fighting line, and I have opened the abdomen of a man in a first-class theatre with the aid of sisters and nurses within three-quarters of an hour of having seen him hit by a shell.

I should like to pause for a moment here to say one word in defence of the conservatism of the South African War. That was essentially a war of movement. We usually slept some 10 to 15 or 20 miles from where we were in the morning. Transport difficulties debarred us from tents, beds, and clean clothes for the wounded, our nearest fixed hospitals were often several days behind us, even with the fleetest transport we possessed. There was no fuel for sterilisation, and often very little water. Anything like an abdominal operation was out of the question. Human nature is extraordinarily adaptive, and gradually our beliefs adapted themselves to our environment, and we became firmly, and I think honestly, convinced that non-interference was the wisest course in bullet wounds of the abdomen; it must be borne in mind that shell wounds were extremely rare.

In addition, we were occasionally meeting cases where this belief was obviously justified. In looking through an old note-book I see that in the fighting outside Pretoria in June, 1900, I picked up and looked after a gunner with a bullet wound through the body, the entrance being in the left loin about 1½ in. from the middle line and below the twelfth rib, while the wound of exit was 2 in. to the left of the middle line, and about 1½ in. above the umbilicus. This man apparently never suffered the least inconvenience after the initial pang of the wound, and a week later his only complaint was of the prolonged starvation to which I had subjected him.

During the latter part of the war abdominal injuries were treated as they would be treated in the civil hospitals of any big city, and it was realised that even a blank exploration was better than leaving a doubtful case. The only novelty was its adaptation to war conditions, and possibly the chief legacy it has left us is a number of enthusiastic young surgeons thoroughly well trained in the technique of abdominal surgery.

NEW LIGHT ON SURGICAL PROBLEMS.

It is, perhaps, when we come to the application of the principle of excision of the wound to injuries of the chest that we see the most startling innovations. The free opening of the chest in cases of hæmothorax and in wounds of the lungs produced by shells, with the immediate and tight closure of the wound, as advocated and practised by Pierre Duval and introduced into our hospitals by Mr. George Gask, another old secretary of this society, in addition to saving many lives abroad will, I think, be a prelude to another chapter in thoracic surgery. It has, at least, taught us that no special pressure chamber installation is necessary for lung surgery, and that a total pneumothorax, so far from being a source of danger, actually places the lung under the best possible conditions for surgical manipulation. I faintly realised this so far back as 1904, when, while

endeavouring to remove a growth, which I thought was confined to a rib, I found myself in the course of the operation with a widely opened thorax and a collapsed lung, from which I had removed a portion of the lower lobe. My astonishment at what I had done was only equalled by my surprise at the way in which the lung responded to the ordinary measures of hæmostasis, and at the comparatively slight disturbance of the patient, who made an easy recovery, but, unfortunately, later succumbed to a recurrence of the growth. Again in this class of surgery has the superiority of regional and local over inhalation anæsthesia been emphasised, and, although I realise that many surgeons for some years have made use of local anæsthesia for excision of ribs in opening empyemata, I think now that the practice will become more general.

Seldom has human ingenuity been subjected to a more severe test, and seldom has there been a better response than in the treatment of fractures during the last five years. It would be beyond my powers to appraise the value of all the various splints which have been devised for the treatment of almost every variety of fracture, and which will, I trust, have a profound influence on the future treatment of fractures in civil hospitals. There will be, I venture to predict, a complete emancipation from the somewhat rigid lines on which these injuries have hitherto been treated; and there will also be, I think, a revolt against the tyranny of conventional splints, and, may I add, of instrument makers.

Until 1914 there had been little encouragement for the busy hospital surgeon who was gifted with a mechanical mind to experiment much in splints. During the war such a man has had every opportunity. To those of us who have had the care of military cases at home those voluntary associations known under such names as war stores or depôts, working in conjunction with the Red Cross, have been the greatest boon. Educated men and women, as a labour of love, have shown the greatest skill and untiring patience in planning splints on the specifications of surgeons to meet the peculiar needs of particular cases. I cannot imagine a more practical form of charity than the continuance, in a modified form, of some such bodies as these to supply the needs of the civil hospitals. Every hospital should have, as some already do, a man sufficiently skilled as a metal worker and carpenter who could himself make, under the direction of the surgeons, a proportion of the splints and mechanical contrivances required in the hospital. Whether this would be an economy or not I am not in a position to say, but I am convinced it would add to the efficiency of the work done in this department.

Compound fractures leave behind them an aftermath of septic sinuses and bone cavities; these will provide occupation and food for thought for a generation of surgeons. I am not convinced that we have yet found any royal road to success in the treatment of these cases, a subject more suitable for a general discussion by the society than for any ex cathedra statements from this chair.

Septic injuries to joints emphasised the extraordinary difficulty we have most of us always experienced in dealing with these cases, and also confirmed the already expressed suspicion that the conventional drainage of such a joint as the knee-joint was not always the surest road to success. In addition to an enormous legacy of stiff and deformed joints the war has left us a number of flail joints as the result of rather extensive excisions, and with these it is a difficult problem to know best how to deal.

Almost as plentiful as fractures were injuries to nerves, and a large amount of experience in dealing with these cases has been accumulated, although, unfortunately, it is not altogether in unison. Among the many subjects for discussion is the best method for bridging the gap, in the continuity of a nerve, too wide for suture of the divided ends. Nerve transplantation, or grafting, as it is often called, and double lateral implantation into a neighbouring nerve, have each their advocates and their critics. Some would even shorten the limb (in the upper extremity) by excision of a portion of bone in order to bring the nerve ends together, while others prefer to leave the nerve alone and to rely on transplanting unaffected muscles to do the work of those paralysed. I am personally in favour of nerve transplantation, using nerve-grafts of the same size as the injured nerves, and these can only be obtained from recently amputated limbs or from amputation stumps. The difficulty, however, in speaking with much authority on such a subject is increased by the length of time that must elapse before one can judge the results, and hitherto by one's inability to keep in touch with demobilised and scattered soldiers. I look forward in the future to an exhibition of results of the various methods of treatment some two or three years after the event, and I have no doubt that the experience gained in this war will do much to clarify our views on the solution of what has always been a difficult problem.

I am standing, however, on common ground when I impress on those of us who are responsible for medical education the importance of exacting from students an accurate knowledge of peripheral nerve distribution and of muscular function—points on which, speaking as an examiner, I am inclined to think sufficient emphasis has not hitherto been laid.

CONCLUSION.

I have touched lightly on a few of the surgical problems which have been ventilated and illuminated by the events of the last five years, and in doing so I have employed the time which I consider should be occupied by the president in introducing himself to the society, but I have scarcely dealt with a tithe of the subject. Plastic surgery, bone grafting, and the surgery of the vascular system each require a chapter to themselves, so extensively has our knowledge grown on these subjects. When one realises this and remembers that general medicine, hygiene, and tropical medicine have all also accumulated masses of new facts and experiences, it is justifiable to believe that we are on the threshold of a new epoch in medicine and that an enormous impetus will be given to the discussions of societies such as this, as this new material becomes digested and classified.

The war has left us a legacy of disease and disabilities; it has also given us a riper experience and a wider knowledge. It is for us to see that the Medical Society of London shows the same activity in the collection and distribution of this new knowledge as it has done for the past century and a half.

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(Continued at foot of next page.)

GAS POISONING.[1]

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ON April 23rd, 1915, Bowlby and I were at Bailleul when a rumour reached us that something extraordinary had happened in the north. We drove at once to Poperinghe and learnt that the French Colonial Corps that held the line to our left from somewhere about Langemarck to Dixmude, where they joined the Belgians, had retreated the previous night, part of them through Poperinghe itself. We drove out to Vlamertinghe, where we found a Canadian F.A. and passed on the way the Northumbrian division going up. One battalion were playing football by the side of the road. At Vlamertinghe we could get no certain news except that the French had fled, and that the Canadians had met the advancing Germans about Pilkem and had held them there. But in the field ambulance I found three Algerian soldiers from whom I made out that the Germans had pumped some fluid out of pipes, had set light to it, and that a dense cloud of some kind had come down upon them which choked them. While we were there a man was brought in whose clothes had a curious smell, and in about five minutes every man in the room had to go out into the open air because our eyes watered so that we could not see. That was my first introduction to Cl and to the tear gas, xylyl bromide.

I need not remind you how the retreat of the French Colonial troops let the Germans in on our left, and eventually obliged us to retire on the Ypres salient, nor how terribly we suffered in consequence. It was about three days later that the same thing happened to our own troops. It was a little lower down the line and the cases were brought in to Bailleul. After that attacks were repeated all through the summer, but as means of protection improved had much less result.

The gas from April to the autumn was Cl. During the winter phosgene began to be used, and in 1916 it was sent over in shells which exploded differently from H.E. shells and could easily be distinguished from them until the enemy began to mix them in a bombardment. We were the first to send over the gas in projectors, which enabled large quantities to be concentrated on a small area and destroyed a great many Germans.

The action of these two gases was much the same. When I first saw the cases in April and found that they turned blue quite early, and, secondly, that they could not be made red again by oxygen, I thought that the hæmoglobin must be in some way changed into methæmoglobin. I had no experience of cyanosis from reduced Hgb which could not be removed by oxygen. However, Macnee and Dr. Haldane both showed that there was nothing but reduced Hgb in the blood.

The men were in great distress, breathing very rapidly, coughing continually, bringing up a yellow, thin, watery frothy fluid, and occasionally vomiting. The cyanosis persisted in spite of oxygen inhalation given as we then gave it, and eventually a large number—10 per cent. of all brought in—died of suffocation.

We gradually recognised three classes. (*a*) The severest of all, which were either collapsed from the first or became collapsed after a day or two. When collapse was present the colour was an ashy grey, the breathing was rapid and shallow, and the pulse was very small. These cases died rapidly. (*b*) Those which were severely affected, but were purple in colour and had a full though rapid pulse. Some of these became progressively worse and eventually became collapsed and grey, and then died. Others, if carefully treated, recovered. (*c*) Slighter cases which showed little cyanosis or none, and only had a slight cough.

Post-mortem examination showed laryngitis, enormous œdema of lungs, emphysema on edge of lung, and air under pleura.

Haldane and other experimenters in England explained the whole course of events, and the various degrees of severity, as all due to but one cause, the want of oxygen in the blood due to the wall of œdema interposed between the air and the blood-vessels. It seemed to me probable that there was also, in those cases which collapsed at once, some other more direct action on the heart.

We rapidly learnt also that exertion, sometimes even very slight exertion, made the patients worse. Thus men who had been comfortable while lying became rapidly worse and sometimes died suddenly if they walked or sat about. The extra amount of oxygen needed in the exertion could not be supplied, and the results showed at once.

At first our treatment consisted in oxygen inefficiently administered and stimulant expectorants, almost always amm. carb. The relief produced by natural vomiting led us to give emetics. But we soon found that these exhausted the patient more than they relieved him. Atropin was tried with the idea that it would diminish the effusion of fluid, but it had no effect.

There was considerable controversy over the effect of bleeding. It was reported to have been of good effect, and in especial in a batch of 100 Seaforths, who were gassed on their way down from the front line in front of Arras. But it takes many clinical observations to establish any rule of treatment, and meanwhile the experiments in England were opposed to bleeding. I urged it always, but it was not till a second series of experiments showed that bleeding was of use that I could get it adopted. It was of no use for cases of collapse, and, indeed, made them worse, and it was not needed for slight cases. It was of use in the cases of cyanosis with a full pulse.

[1] Introductory remarks to a debate at the Royal Society of Medicine, War Section, held on Feb. 9th.

(*Continued from previous page.*)

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But the main remedy was undoubtedly oxygen. At first we gave it as we had given it to cases of pneumonia at home. This was of little use; we moulded masks out of gutta and celluloid, and gradually gave the gas with less waste and more continuously, and to several at a time by means of apparatus made out of petrol tins and gas pipes.

But gradually we received supplies of Haldane's apparatus, which was fixed straight on to the cylinder of oxygen, and contained (1) a transformer, reducing the pressure to moderate limits, (2) a distributer by which four patients could be fed at a time, and the number of litres per minute given to each checked. This, when earnestly and faithfully employed, was very efficacious. I have seen men in whom the stoppage of oxygen for any five minutes during the first 48 hours turned them blue again, eventually recover.

After the war was over and I had come home I learnt that a chemist employed in some industry in the north who was in the habit of going to Germany periodically had in 1909 come upon a party of soldiers evidently experimenting with some poisonous gas on a herd of sheep, many of which were dying or dead. He was warned off so quickly that he had no opportunity to see any details, and thought no more of it.

Our people were quite unprepared for anything of the kind. It created a great panic at headquarters, and it both frightened and at the same time exasperated the soldiers. For some time after that we had frequent alarms that some new method was contemplated, and, among others, the oddest was the news that "quebracho" was to be employed. There was nothing to be made of quebracho in any books available, and it did not seem likely to be dangerous, but it was firmly believed in for some time.

The authorities, at the head of whom was Colonel Cummins, immediately set to work to devise protection. The flannel rags were succeeded by respirators chemically treated, and then by cloth helmets, which were improved as time went on. But it was not till the autumn that these could be provided in sufficient numbers. A plant was set up in France for renewing the chemical soaking, but the chief weakness of the helmets was the gelatin or talc eye-piece, which was often broken and thus made the helmet useless. Ultimately, about two years later, the helmet was replaced by the box respirator, which was a very efficient protector.

On the night of July 13th, 1917, the Germans for the first time employed di-chlor-ethyl-sulphide, or mustard gas, on the front north of Ypres, and a fortnight later in the Nieuport sector. In each case between 3000 and 4000 casualties occurred. I was with G.H.Q. at Hesdin at the time, but got to the Proven area where the first set of cases were admitted a day or two later, saw a large number of cases and a few post-mortems. In a field ambulance north of Furnes I saw a large number of the second batch while they were still coming in.

They were of a totally different character from the earlier cases of Cl or phosgene poisoning. It had three main actions: the first causing violent conjunctivitis with swelling of the lids; another scorching the whole of the air-passages so far as it penetrated; and the third inflaming the skin, and producing, even without previous inflammation, large areas of brown pigmentation. It was said by some that the parts of the skin chiefly affected were those in which there are sebaceous glands.

The effect upon the eyes was such that the men were practically blinded. In the hospitals you might see what Mr. Sargent so well represents in his picture now in the Academy, strings of men led by one who could see, groping their way about the camp. The skin where affected was of a fiery red, and many men were sent in as cases of scarlatina. In some cases the burns were so severe as to cause death. They were worst on the buttocks and about the genitals where the skin was sweaty. The most dangerous lesion was in the air-passages. The nose, fauces, larynx, and trachea were often so badly scorched that the mucous membrane sloughed. Besides causing great pain this necessarily converted these tracts into raw suppurating surfaces infected with many septic organisms which were inhaled into the lungs and set up a dangerous septic broncho-pneumonia. All these appearances were often seen post mortem, and I made one post-mortem on a man who had died within 12 hours in which the small bronchi and bronchioles were plugged with a muco-fibrinous clot which was pulled out like a cast of the passages.

Di-chlor-ethyl-sulphide was studied by Victor Meyer, who had published an account of it in the "eighties." It had been suggested to our War Council as a weapon in 1916, but had been refused. Now when we saw what effects it could produce G.H.Q. asked for some as soon as it could be made. We did not, however, discover the way to make it for two years, and it was not until our last advance had begun that we had it in any sufficient quantity.

We made out that its fatality was about 3 per cent. But its military effect was not to be measured by this. Its stable character and its weight caused it to cling to ground on which it had been thrown, and not only did it oblige the evacuation of a position, but it also rendered that position untenable sometimes for a fortnight. The stuff soaked through leggings and even through the upper parts of boots, so that though the box respirators preserved the air-passages and the eyes they could not protect the rest of the body from severe burns. With lesions of that character it is rather curious that the kidneys did not, as far as I know, suffer.

A certain number of cases of laryngitis with very persistent hoarseness were seen later, in which the men said that they had been in the neighbourhood of gas though without feeling any effects at the time. It seemed probable that a very slight exposure to the vapour had produced a chronic laryngitis.

The treatment of the eyes was chiefly by means of alkaline douches and castor oil drops. The throat and larynx were eased by inhalation of an antiseptic anodyne containing tr. iodi., menthol, and creosote in rectified spirit, with which a respirator was kept wet. There was no doubt of its effect, as judged by the amount of coughing in a ward where it was used. The skin was very difficult and very painful to treat. Wet alkaline dressings were usually preferred. In France, at any rate at the front, we saw only the immediate effects. Interesting sequelæ were found to occur, of which others can speak with greater authority than I.

A question which is of importance remains. Is it likely that such a weapon once employed can in future be ruled out of war? There are examples—e.g., explosive bullets against infantry—but that is, so far as I know, the only successful attempt. It is probable that any belligerent will be obliged in future to pursue researches in this direction, and to provide himself with the most dangerous gases at his command.

SOME ASPECTS OF THE TUBERCULOSIS PROBLEM.[1]

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WHEN addressing an audience on Industrial Tuberculosis at Merthyr in February, 1911, I said that "the lessons of the sanatorium must be made the basis of prevention. The real warfare must be carried on in the houses and the workshops of the people. The people must realise that it was themselves who were in the fighting line." These conclusions were largely founded on a paper that I had read at the Second Congress of the Industrial Diseases that was held in Brussels in 1910 and which was subsequently published in THE LANCET[2] of that year.

It is interesting to me to realise that there has been an evolution of ideas, and indeed a definite movement, in the direction I then indicated. Unfortunately there has been also an expansion of administrative efforts on what must be regarded as stereotyped lines. The report of the Departmental Committee on Tuberculosis, which was presided over by the then Mr. Waldorf Astor and the activities of National Insurance are familiar to most of us. Everyone realises also the great social changes that were brought about by placing an enormous army in the field and supplying its needs by munition work at home. The late Local Government Board was somewhat disturbed from its usual complacency by the discovery that tuberculosis had rapidly increased during the war. A laborious attempt at an explanation was made in a special L.G.B. report, which I really attempted to understand and have referred to in a paper on the Value and Limitations of Sanatorium Treatment published in THE LANCET of Nov. 17th, 1917 (p. 739).

In a very clearly written essay in the *Universal Medical Record* of November, 1912, two points of view were discussed, those of Robin and Calmette. Robin seems to suggest that the important thing in tuberculosis is the terrain, and that we cannot directly attack the bacillus. Calmette denies that there is a particular soil, and thinks that there is neither natural immunity from, nor predisposition to, infection by Koch's bacillus.

Sanarelli, of Bologna, wrote in 1910, at the Rome Congress on Tuberculosis, of the biological evolution of the disease, and pointed out how urbanisation was not only associated with a high incidence of tubercle, but that it was only where countries were urbanised that there had been during the last 60 years a progressive fall in the death-rate from tuberculosis.

There is no necessity for me to remind you that infection is practically universal among those who live in towns, nor for me to repeat the remark so often used in a merely sensational manner that 10 per cent. of all deaths occur from tuberculosis. We are getting tired of the constant reiteration of the fact that 60,000 deaths occur annually from consumption and other forms of tuberculosis in the United Kingdom. I will not on this occasion recapitulate the evidence as to general infection which has been so often demonstrated by post-mortem evidence and by clinical tests.

But having realised the facts to which I have briefly referred I tried to coördinate them in my own mind, and the first and chief puzzle that occurs to me is the difficulty of understanding why 90 per cent. of a population infected by tubercle do not succumb to it.

Problems of Research.

The question is whether we should try to prevent infection among the whole mass of the population or should we endeavour to prevent the occurrence of death among the small minority that succumb? If nothing less than a stamping out of consumption by the elimination of the tubercle bacilli is to content us it seems that we are setting ourselves rather a hopeless task. If, on the other hand, we desire to bring about its harmlessness there are two great problems for research which immediately suggest themselves. Firstly, why is the tubercle bacillus a comparatively harmless pest to the great majority of the population? And, secondly, why is it fatal to a minority of the population, though that minority is so enormous amongst us as to render the disease the terrible scourge it is?

This is, I think a fairly obvious and logical statement of the problem of tuberculosis, but there is no single immediate line of activity to suggest either in administration or in research which would prove the royal road to success.

If the pathologists are right in demonstrating that all men are susceptible to infection, but that only the minority are capable of fatal infection, then we have to deal with at least four factors. In regard to those who are capable of infection but do not succumb, we have to consider whether this power to overcome infection arises from something definite within themselves or something which comes from the happy external circumstances of living in which they may be placed. In regard to those who succumb when infected a similar question must arise. Is their liability to death dependent on some inherent quality in themselves or upon unhappy external circumstances?

I think we can disregard the consideration of the possibility of preventing the existence of the tubercle bacillus. It is, I conclude, impossible to disinfect the world, though astronomers promise us a complete sterilisation finally. As a practical problem we have only to consider how we should diminish the morbidity and mortality arising from the bacillus. Let us not forget that wherever civilisation has carried the tubercle bacillus and other of its advantages into populations previously not known to be affected, it has been more powerful than the weapons of war in destroying those populations. Let us remember also with Sanarelli that the fall in the death-rate has occurred in the most highly urbanised countries, which are presumably, therefore, also the most civilised. Alongside our puny efforts of national campaigns against tuberculosis which are being made in nearly every country, infinitely greater forces are at work, killing off the weaker strains of the human organism, directed by the stern rules of natural evolution. It is no doubt right from a merely human point of view for any administrative body or department that has the buzz of its machinery always in its ears, to claim that the whole of the effects which it observes are due to that machinery. My own feeling in regard to the matter of prevention is that the effect of such national campaigns, however highly organised and well meaning they may be, is at present of about

[1] Being the substance of an address before the Medical Society of Cardiff.

[2] THE LANCET, 1910, ii., 1122.

as much use as the fly on the coach wheel who thinks what a dust he is making.

The Assistance of Natural Cure.

In the endeavour to assist Nature's cure of tuberculosis we must in all humility limit our aspirations to the endeavour to assist her methods, and at the same time try to wrest from her some of the secrets of those methods, which may be hidden in the replies to the four bald questions that I have just stated—namely, what are the physiological and environmental factors of immunity and vulnerability respectively. In other words, the first step in any government campaign against tuberculosis should be well-directed research. For nearly 40 years we have been doing homage to the bacillus by creating ingenious ambulances and all the machinery of clearing stations and hospitals while doing little or nothing to investigate the real problems of the disease. The discovery of the bacillus was such an outstanding accomplishment that we have become obsessed by it and have forgotten a good deal of the natural history of its relationship to human progress and social evolution. Nearly all our machinery has been directed to the recognition of the disease, to its appropriate therapeutics according to the individual requirements of our cases, and to the attempt to prevent infection and re-infection.

Recent correspondence in the *British Medical Journal* has supplied an object-lesson in erroneous methods. Dr. B. G. M. Baskett, in view of the close correspondence between the fall in the death-rate from tubercle and the decrease of poverty, tried to prove that the mortality was related to the real value of wages. Subsequent writers side-tracked the discussion. Dr. Baskett was right in insisting upon the relationship between the tubercle mortality and environmental factors, of which poverty may be taken as one measure. But it is not the only measure. The comparative study of industrial mortality would have shown him that there are some other points to be considered than the mere purchasing power of wages.

Local Problems.

By the courtesy of Dr. E. Walford, medical officer of health, I have been enabled to read the annual report on the city of Cardiff for 1918 and the seventh annual report of the King Edward VII. Welsh National Memorial Association. I do not know the conditions of living in the various municipal wards of the city, but I notice that the death-rate from phthisis per 1000 persons living varied in 1918 from 0·94 in Roath Ward to 5·11 in South Ward, the figure for the whole city being 1·77. This disproportionate difference between two extreme figures leads me to the conclusion that the conditions of life generally in Roath Ward are more satisfactory than those in South Ward.

I also notice that the death-rate from tubercle in 1918 for the whole city is nearly 70 per cent. greater than it was in 1910, and that in South Ward it is more than twice as great. I notice also that from 1915 to 1918 the death-rate in South Ward has trebled, while in Roath Ward it has scarcely increased. I know nothing of the wage conditions either in Roath Ward or in South Ward, but I would like these and many other points of difference between the two wards to be investigated. I would like to know what the occupations and habits are of the people in these widely differing tuberculosis areas. I should like the physical standards measured. I would like to know whether wages have increased in the South Ward during these last years, and whether the people themselves show any understanding of how their increase in wages, if any, should be spent to hygienic advantage. Has there been an invasion of unhealthy people? Has tuberculosis been better recognised in the South Ward?

The statistics of the report also show that the death-rate from phthisis is 50 per cent. greater even in 1918 than the average rate for ten years from 1908 to 1917, but it was increasing throughout the duration of the war. This is a common experience of the whole country, and Cardiff, although one has good reason to believe that it has not been lacking in prosperity during these past five years, shows even a greater increase in its tuberculosis mortality than the average of the country. But as I have pointed out, the increased mortality is disproportionately borne by certain wards of the city. I would like to know why. In other words, these figures, like all the figures relating to tuberculosis, show that there is an intimate association between a heavy phthisis mortality and some social conditions. This is a question of policy and not of politics.

Measures for Prevention and Treatment are not Identical.

Fresh suggestions are continually made for increasing the expenditure of public money on treatment. When sanatorium methods apparently fail to secure any permanent benefit for cases of industrial tuberculosis, we suggest increased segregation of the advanced cases, farm colonies for the chronic cases, after-care committees, and especially more officials, both lay and medical. No wonder the medical officer of health of Edinburgh, the place of origin of the tuberculosis dispensary system, complained early in 1917 that our methods are upside down. For years past I have been pointing this out so far as tuberculosis is concerned.

When a patient has been discharged from a sanatorium with his disease arrested we know that something called resistance has prevented the further extension of his illness, and that he has obtained this something under sanatorium conditions. We know also, however, that before he went into the sanatorium he must have been under different conditions where his resistance was broken down. We send our successes back to these same adverse conditions, and the public complains that the sanatorium is no good because they relapse.

It is very interesting to me, who have for over ten years recognised this anomaly, to see that the idea has gradually dawned on our publicists that we might as well try to provide such conditions of life and labour as would render the expensive sanatorium unnecessary. Not only would such conditions prevent a large amount of tuberculosis, but also many of the other evils associated with bad surroundings. The medical practitioner has always been in advance of the hygienist in this matter. Whenever I have discussed the problem of tuberculosis with individual practitioners they have always said to me that it is a disease depending on social conditions, which on the one hand destroy resistance, and on the other favour infection.

It is to the social conditions that research should in the first place be directed. We must no longer be misled by such shibboleths as a phrase in a Local Government Board Report which states that measures for treatment and prevention are largely

identical. We must, on the other hand, insist that prevention is an entirely different problem from treatment, and requires an entirely different machine. We cannot "treat" until we have failed to "prevent."

Some small attempts have already been made in this direction during the war, and a report published in 1915 by the Medical Research Committee on "The Incidence of Phthisis in the Boot and Shoe Industry" was a move in the right direction. I went much further in a lecture given at the Institute of Hygiene in April, 1914, on "Consumption and its Prevention." I claimed then, and I still say, that systematic research on uniform lines, not only in regard to occupation but in regard to all the functions of communal life in any group of the population showing a high tuberculosis mortality, is the proper method of approach to the problem. It must not be supposed that, though I recognise the need for sociological research, I ignore the necessity for the fullest pathological investigation of the clinical problems of tuberculosis. Let us turn for a moment to the last report of the Welsh National Memorial Association. It deals almost entirely with questions and statistics of treatment, though I am glad to say that it reiterates its objects as including the prevention and eradication of tuberculosis in Wales, and, in particular, the provision of treatment. The special report appended on the medical policy of the association is, however, of interest. The governors of the association decided in July, 1917, to ask the Council to consider the steps which should be taken to develop the preventive side of the work. The special report is in two sections, eleven pages still dealing with treatment and only seven with prevention. It is probably familiar to those practising in Wales, and I need not therefore recapitulate it. Briefly, the section dealing with treatment points out that medical practitioners, including school medical officers and others, are invited to refer to the tuberculosis officer cases, both diagnosed and suspected. Clinical diagnosis is said to be the most important duty of the tuberculosis officer. Treatment is considered under various headings and many groups of patients are defined. The aid given by the subordinate officers, such as health visitors and district nurses, is also indicated, and a considerable space is allotted to institutional methods.

Coöperation of the General Practitioner.

But I do not see in Wales, any more than in England, that there is much direct encouragement and support to the practitioner. I should surmise that much more use could be made of practitioners in Wales as in England if their time and services were adequately remunerated. I consider that the general practitioner should be the backbone of all measures undertaken for the diagnosis and treatment of tuberculosis, as he should be of all clinical work, and it is a mistaken policy which limits the public recognition of the power to make an early diagnosis to too few individuals. The interest of the practitioner in tuberculosis is liable to be restricted to the comparatively advanced cases, and distrust of their medical attendants is encouraged amongst the public. What seems to me desirable in every public institution where the tuberculosis officer is in attendance, whether dispensary or otherwise, is that the local practitioner should be asked to coöperate as a co-director and be adequately paid for his time and services. The private surgery and the absence of trained helpers render it difficult for the practitioner to give the same services as he could professionally well give when working as an associate of the tuberculosis officer so far as clinical work is concerned. Provided that proper remuneration were offered, there seems little reason to fear that there would not be sufficient doctors to make an adequate rota in the week's work. The advantage to the public would be the keener interest that men would acquire in the early recognition of the various manifestations of tuberculosis. The tuberculosis officer would be rapidly relieved of a great deal of what is the simplest kind of repetition work. In England, perhaps this does not apply to Wales, the tuberculosis officer has little time for anything but clinical work. Apart from the examination of sputa for the bacillus, he is unable to direct the channels of pathological investigation or to scrutinise minutely the population under his care. Under some system of coöperation as I have suggested the skill necessary for the recognition and classification of the various groups of cases would be rapidly acquired by the practitioner. The tuberculosis officer would be enabled to devote some of his time, which is at present largely wasted, to the important problems of prevention. I know the amount of training that many tuberculosis officers have received before they were appointed. There is no doubt in my mind that equal clinical skill is easily within the reach of most general practitioners who are desirous of acquiring it. Moreover, all general practitioners have that experience of general diseases which is frequently lacking in the young "expert."

The Interpretation of Technical Terms.

When I turn to that section of the special report which deals with the problem of prevention I am struck with the completeness with which the problem is identified as being merely one of infection by the bacillus. Even the section on research suggests very little except work on the virulence and infectivity of the bacillus. There are other problems for the pathologist who would escape from routine methods, such as the antithetic relationship of gout and tuberculosis, if it exists, and the problem of the endocrine secretions and the modern revival of the doctrines of "diathesis" and "constitution." What do these things really mean?

We are a profession that loves to disguise its appalling ignorance. Lawyers, who seem to be our natural enemies, often taunt us with our smug substitution of a polysyllabic word of doubtful etymology for what might be expressed in simple English. Many a patient is comforted by being told that they are suffering from pleurodynia when they complain of a pain in the chest. We speak of a strong or a weak "constitution" and only occasionally wonder what we mean by it. The short-sightedness with which Parliament framed the Insurance Act has tended to perpetuate symptomatic treatment and the bottle of medicine. I believe Sir Clifford Allbutt has pointed this out on many occasions.

I would like to refer very briefly to some of the suggestions in Sir George Newman's Outline of Preventive Medicine as to the question under discussion. He says on p. 74, when dealing with this subject, "frankly many authorities directly responsible for dealing with this disease are at

present merely playing with it," and sums up this particular section by saying—

"It is obvious that much remains to be done. The standard of diagnosis in tuberculosis, the scope and duties of the tuberculosis officer and tuberculosis nurse, the managemant of residential institutions, the education of the patient and his after-care, the relation of the disease to industry and tuberculous milk, the investigation of local high incidence, the subject of non-pulmonary and surgical tuberculosis—all these questions call for careful attention and some of them for immediate action."

On pp. 96 to 98 a series of questions are postulated for diseases in general, which it would take the whole army of medical men in this country the whole of their time to investigate supposing even that they were adequately trained and equipped. I do not say that it is probable, but it is perhaps possible that greater good could be derived by so employing the whole of the profession than by treating the symptoms of disease by pills and potions. It is certainly impracticable, and though the lasting good to posterity would be incalculable, yet those of us who have the misfortune to be mere clinicians realise that the present generation would suffer even more than they do at present from the drug vendor.

If, however, such questions were answered even for only one great group of diseases—namely, those we recognise as tuberculosis—a great many of the other questions relating to allied affections depending on lack of hygiene would also be solved. The questions are based on the evolution in ideas which has occurred during the last ten years.

It is always dangerous ground to tread upon when one arrives at conclusions that the methods in vogue are not the last word in practice. Those who are cogs in the administrative wheels cannot conceive that they should ever be in any different relation to their work than the relation in which they stand to the neighbouring wheel. Having set up an engine, we are particularly liable to continue its use even when its inefficiency has been demonstrated.

I would like to say here that I do not for a moment claim that my own views have been any more than an early part of the general evolution that is taking place in regard to tuberculosis. But Sir George Newman shows throughout the greater part of this Memorandum such a large grasp and imagination that we may almost wonder at its being the outcome of an official mind.

I would like to quote one remark on p. 101 of the report, dealing with an adequate medical service. He says that the "foundation of the medical service is the medical practitioner, he is its pivot, its anchor, and its instrument."

The Improvement of Conditions for the General Practitioner.

But he goes on to talk about the necessity of improving the facilities of the practitioner for post-graduate instruction, for improving facilities for practising his profession, and even suggests that—

"He should be provided with the means to help himself in his struggle against desperate, indeed almost hopeless, conditions—without assistance, guidance, or coöperation which is readily available, without laboratory facilities, without nurses, without ample clinical and hospital accommodation. All the State appears to have done is to take away his patients—tuberculous, school children, venereal disease—instead of strengthening his position, equipment, and capacity to deal with them himself."

In concluding his remarks on the general practitioner he quotes Sir Bertrand Dawson's statement that—

"The general practitioner's outlook needs to be more comprehensive. In him should be realised the correlation of preventive and curative medicine. He should concern himself with the Ministry of Health as well as disease; he must be brought into the condition of a rightful leader and skilled adviser in all that appertains to the social service and welfare of his district. In matters of health he should be the father of his people."

I think we all know where the difficulties lie in one respect. I think the medical practitioner is rather tired of getting good advice. If I am right in my surmise as to the different conditions that prevail in the South Ward of Cardiff from those which prevail in other wards with a much smaller tuberculosis mortality, the practitioner in South Ward would be glad to see some of these facilities. I am not quite sure what is meant by facilities, but I do not see how it is possible under existing conditions of general practice for the practitioners to make use of these facilities, post-graduate study, clinics, tuberculosis officers, and all the rest of it unless he is made a willing, and that means adequately paid, member of the medical service. The remedy should lie in his own hands, but the very conditions under which he works seem too often to have destroyed his initiative, and rendered him an object of criticism for those who say falsely that his only natural desire is his personal benefit.

Nevertheless at a recent conference of Panel Committees in England the representatives of the panel doctors themselves turned down the discussion of "practitioners' clinics." Under the present conditions of general practice they saw no use in considering the question. In other words, although they claim justly that there should be an increase in their capitation fee, the competitive needs of themselves and families prevailed against the possible benefit that could be derived from combined practice, and they have created the impression that they do not desire to give a better service.

Conclusion.

Some of you may remember a letter which THE LANCET and the *Times* published at length, written just before the Insurance Act came into force, at the end of negotiations which then took place between the profession and the Government. I then suggested a similar coördination in clinics, which has now been re-discovered as "team-work." This now has the approval of not only leading practitioners but also the chief medical officer of the Ministry of Health.

But neither Sir Bertrand Dawson nor Sir George Newman can expect general practitioners to regard this necessity as one they are willing to coöperate in providing until some guarantee is given. The medical practitioner requires a little more invitation and a little less telling. He wants less depreciation and more appreciation. His part in solving the problem of tuberculosis should be that of diagnosis and treatment. He should be the willing co-director of all the agencies established to enable him to carry out these functions. Medical research should involve much more than staining sputum, and there is enough work in tuberculosis alone, if all its aspects are to be studied, to keep the Medical Research Committee quiet and busy for some time to come. But if they were considered a great many other questions would cease to require solution.

These two points I would like specially to emphasise. Tubercle is the index disease of social conditions, and the severest test of our clinical skill, and can only be approached successfully when we begin to understand something of the causes of health among the infected. It is not merely by the diagnosis and treatment of those who are unhealthy among the infected that we shall ever solve this problem.

ABSCESS OF THE LIVER

AMONG BRITISH EASTERN TROOPS.[1]

BY A. L. CANDLER, F.R.C.S. ENG., M.B., B.S. LOND.,
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THERE are several severe tropical diseases to which those who have been on service in the East are subject after return to this country. As surgical specialist to British general hospitals in Salonica, Mesopotamia, and the Punjab I have had an opportunity of learning about, and dealing with, inflammation and abscess of the liver due to infection by *Entamœba histolytica*, and therefore venture to deal with this disease in the hope that my experience may be useful to others who have not hitherto had the opportunity of meeting such disease, but who may do so among demobilised troops.

Inflammation or abscess of the liver occurs not infrequently after the bowel has been infected by the *Entamœba histolytica*, and is therefore a late complication of amœbic dysentery, but it is certain that patients suffer from amœbic inflammation and abscess of the liver who have not had diarrhœa or any symptoms which made them suspect that their bowels were infected by the amœba. In 3 cases of hepatitis and 13 of tropical abscess of the liver under my care only 3 had knowledge of having had diarrhœa or dysentery; the patients were British and could be credited with intelligence. Osler mentions that in 27 cases 5 had no dysentery, 2 had normal mucosa, and 2 had *old* scars in the large bowel. Rogers mentions 18 per cent. of cases without history of dysentery. In 1 fatal case under my care there was no lesion of the bowel except one small healing insignificant ulcer in the ascending colon. In my other fatal case the bowel appeared normal post mortem. In the fæces from 12 of my cases amœbæ were found by the pathologist in 3 only. It therefore appears that patients who have had an amœbic infection so slight that it did not cause diarrhœa or dysentery, and was therefore not treated, are more prone to infection of the liver than those whose infection caused diarrhœa, dysentery, diagnosis, and treatment. This point is obviously important in considering the history for diagnosis.

In amœbic dysentery the large bowel is ulcerated, with undermining of the mucous membrane, and it is in the walls of the ulcer that the amœbæ are found most plentifully. It is stated (Osler) that amœbæ have been found in the portal capillaries, and this channel may be their route to the liver. On arrival they may cause either a general hepatitis or one or more abscesses. Such an abscess has an inner necrotic wall surrounded by an area with increased connective-tissue cells squashing the liver cells, while outside this is an area of hyperæmia. It is remarkable that there is no great local leucocytosis unless the abscess is secondarily infected with pyogenic organisms.

The pus is usually greenish-yellow and slimy, and not often pinkish according to the objectionable description "anchovy sauce"; the pus is sterile to ordinary organisms, this point clearly differentiating the abscess from one caused by the more ordinary Western infections. It is difficult to find the amœbæ in this pus, but they are more easily found in the drainage-tube later, the explanation being that the tube touches the abscess wall in which the amœbæ are more plentiful and that they pass direct to the tube.

The abscess usually starts deep and nearly always in the right lobe. I have had no experience of multiple small abscesses; it is far commoner for the abscess to be solitary. It enlarges, and in so doing destroys liver substance and encroaches either (1) towards the ribs; or (2) beneath the diaphragm, through which it may perforate into the lung or pleural cavity; or (3) towards the epigastrium, bursting through the abdominal wall into the peritoneal cavity or a hollow viscus. I have seen a small Arab girl in whom a hepatic abscess had burst through her right rectus abdominis. Osler mentions nine rupturing into lung, three into pleura, and three into vena cava. In encroaching towards ribs or diaphragm it causes local dry peritonitis or pleurisy and therefore pain, diminution in movement of the diaphragm, and congestion of the base of the lung; it is important to note this sequence of events, for they are liable to lead to false diagnosis in cases seen late in the disease; in pushing the diaphragm upwards and outwards it diminishes the costo-diaphragmatic space, thereby making the surgical approach to the cavity much easier, and lessening risk to the patient's pleural cavity.

Diagnosis.

Diagnosis is difficult. Sir Leonard Rogers states that in 30 European cases 50 per cent. had had fever over one month before the abscess was found, and 34 per cent. between two and four weeks. The onset is insidious. There may be a history of diarrhœa or dysentery, but in my experience, as already stated, there is no such history in the majority of cases; in fact, there is often one of constipation. Similarly, amœbæ are often not found in the fæces. The general condition of the patient varies with the size and chronicity of the abscess; patients who have been ill two or three weeks are slightly sallow without jaundice, thin in the face and drawn in expression, with some anæmia; content to lie still but having pain on movement of the trunk, situated usually over the right lobe of the liver. In the early stages there is no pain at all. If there is perihepatitis or pleurisy pain is present when a deep breath is taken.

The pulse-rate is about 100 to 110, or even lower, the fever being continuous but not very high—101° to 102° F. But both pulse-rate and temperature may be lower than the figures given, and yet a considerable amount of pus present with destruction of liver substance. The temperature of one patient is of interest, as he had first a right epigastric abscess and later one high up in the right lobe; the latter contained about 10 ounces of pus, and yet previous to the second operation he was apparently improving according to his chart alone; the chart gave a false impression—he was emaciated, anæmic, and very ill, with half a pint of pus in his liver, yet during the ten days previous

[1] A paper read before the Devon and Exeter Medico-Chirurgical Society on Dec. 18th, 1919.

to operation his pulse-rate rarely reached 100, and his temperature was not above 101°.

An abscess coming downwards to the epigastrium is fairly easy to diagnose, as the local tender enlargement can be felt and easily approached. Difficulty occurs when the abscess is in its more common situation beneath the ribs and diaphragm. There is often some slight œdema or bulging of the chest wall over the abscess; the liver may be felt slightly enlarged beneath the costal margin, and its upper level of dullness may be raised; one very characteristic feature is a dome-like rise in the area of the liver dullness below the axilla. I suggest that this is due to the fact that the diaphragmatic muscle is longer at the side than in front or behind as it passes from thoracic wall to three-lobed central tendon and that the muscle is stretched more easily than the central tendon, allowing liver to expand in the side to the costal wall, but not in front or behind. Tenderness on pressure over the region of the abscess is present, and its maximum point is a guide to the position of the abscess.

Limitation in movement and upward bulging of the diaphragm can be seen by X ray, and such examination is a great help in diagnosis, but I have not seen an abscess *in* the liver photographed. If an abscess be low down in the liver the diaphragm is not limited in movement, and I feel sure that one of the serious complications and also difficulties in diagnosis is that limitation of movements of the diaphragm and lower ribs, due to inflamed pleura, peritoneum, and liver, causes congestion of the base of the right lung, which easily becomes infected with pyogenic organisms. This means increase of fever, pulse-rate, and leucocytosis, while the inflamed lung is liable to disguise inflamed liver below and beneath it. This seems so important that a summary of such a case is worth putting forward.

A man obviously suffering from some severe disease was in one of my wards for five weeks, and was seen by the consulting surgeon and physician to the Forces and by other medical officers; he died with a large abscess in each lobe of his liver. I had explored his liver by multiple punctures on two occasions under general anæsthetic. He had severe inflammation of the base of the right lung and later of the left lung, coughed up streptococci and pneumococci, and had a leucocytosis of 21,000 with polymorphonuclear increase. As puncture failed to find pus in his liver he was considered to be suffering only from infection of lungs. Post mortem his liver was a shell containing two large abscesses without any enlargement of liver downwards or upwards, but with marked inflamed adhesions to diaphragm and peritoneum and severe inflammation of bases of lungs and bronchi.

I feel that this man should have been diagnosed, but the "red herring" of inflammation of the lung and failure to find pus by exploring punctures put me off the track.

Leucocytosis is uncertain in an uncomplicated tropical abscess of liver; it can be as low as 4700 and as high as 28,000; in my opinion the high leucocytosis is often due to inflammation of the base of the lung rather than to the abscess in the liver. It is also a remarkable fact that the wall of the abscess cavity is not crowded with leucocytes as in an infection by pyogenic organisms. The percentage of polymorphs is not increased, being 70 to 80 per cent., while lymphocytes are about 8 to 15 per cent.; the differential leucocyte count thus gives a further point distinguishing abscess due to amœbic infection from that due to pyogenic organisms, but this difference will not hold good if the lung is inflamed.

The ultimate diagnosis is the finding of pus, and this is searched for by puncture, preferably with a long trocar and cannula, like Barker's lumbar puncture needle, and under general anæsthesia. Multiple punctures are often necessary, the needle being withdrawn to the skin before change of direction, otherwise the liver will be torn; a good well-fitting syringe is necessary, and even with these precautions it happens not infrequently that pus is missed. I suggest that one reason is that the liver will not collapse easily, and therefore suction is made against a vacuum; also the pus is mucoid and thick, and the explorer perhaps has qualms about large veins in the liver. There are remarkable cases of hepatitis where punctures have been made in search of pus in inflamed livers followed by rapid cure of liver and patient; one man with hepatitis recovered within 24 hours after puncture, his liver going back to normal size, tenderness disappearing, and fever stopping.

But if it is strongly suspected that there is an abscess and puncture fails to find pus, in my opinion an epigastric incision should be made and the liver surface felt by the hand passed under the diaphragm. By this method I found an abscess in the liver near the middle line under the right costal cartilages; it did not contain more than 3 drachms of pus, and I had failed to find it by puncture, as one would expect in such a case. On another occasion I felt fine recent adhesions between the top of the liver and diaphragm. I closed the epigastric incision and resected the rib just above the adhesions, draining an abscess containing 3 ounces of pus which I had failed to find by puncture. One is dealing with a severe disease difficult to diagnose, difficult to locate, and causing destruction of liver, and it is all-important to deal with it early. I therefore feel that an exploratory epigastric incision should be made early if emetine and puncture fail in a case where the disease is suspected.

Treatment.

The treatment of hepatitis due to amœbic infection is hypodermic injections of emetine, which rapidly cause the disappearance of pain, enlargement of liver, and fever. If they persist it is probable that an abscess is present. In Mesopotamia and India emetine hydrochloride was given hypodermically in 1-gr. doses daily, sometimes twice daily for the first few days. I heard that some hearts were damaged by too much emetine, but I saw none. It is said to be cumulative in effect and so the injections are discontinued after ten days and a further course of injections given later if necessary. Bismuth emetine iodide was given in pills for dysentery, but in my experience they caused nausea and vomiting, which did not happen with hypodermic injections of emetine hydrochloride: it is interesting to note that the pills were reported for a period not to cause nausea and vomiting until some enthusiast discovered the pills unchanged in their coats in the fæces.

If an abscess is present it must be drained either by epigastric or by costo-diaphragmatic route. Epigastric draining is usually easy and, provided that the peritoneal cavity is packed off before the abscess is opened, there is little risk of infecting the general peritoneal cavity. Cathcart's method of putting in the drainage-tube on the stretch is useful, as in expanding it closely fits the hole of entry into the liver. It is almost unnecessary to

say that as little damage as possible to liver and its vessels is caused, blunt instruments being used. If drainage is made through the thoracic wall, 1½ inches of rib are excised, as in operating for empyema; but before the posterior periosteum at the site of the excised rib is opened, deep catgut sutures are passed by a fully curved small needle, suturing diaphragmatic muscle to intercostal muscle above and below the area of rib excised; by this means the pleural cavity is shut off, and risk of pneumothorax or empyema is diminished; the diaphragm is usually so pushed towards the thoracic wall that the costo-diaphragmatic space is diminished, and it is easy to suture diaphragm to intercostal muscles, and also to incise the periosteum and the diaphragm without going through pleura in many cases. Two medium-sized tubes are better than one large one, as they allow of irrigation later without pressure.

Aspiration of the abscess has been advocated; when the abscess is found by puncture it is aspirated as far as possible, and then a solution of 20 gr. of quinine sulphate in 2 ounces of water are injected before the needle is withdrawn; I am told that if this is done it is probable that the abscess will be cured, but that it is uncertain and recurrence is more likely than after drainage.

After-treatment consists in the hypodermic injection of emetine and careful sterility in dressing; the pus is sterile to pyogenic organisms, and if the cavity becomes infected by them there will be prolonged discharge and sinus at any rate. I believe that the tubes should be removed as early as possible—that is, as soon as the slimy purulent discharge has ceased—usually within a fortnight to three weeks; it is the emetine which will ultimately kill the amœba, not the drainage, and if the tube is left in long the chances of secondary infection and persistent sinus are increased. I have seen liver abscesses drained by epigastric and by costal route heal within six weeks, but the tubes were removed early; others of my cases had to be evacuated and I do not know how long they took to heal, but in all cases the tubes had been removed and the patients observed for a few days before evacuation.

The pathologist, Captain C. C. Twort, examined the behaviour of active amœbæ in eusol and it is interesting to know that the amœbæ crawled and were active at first in ordinary eusol. After five minutes they were rounded and motility was slow; after half an hour they were still motile but feebly so. Therefore eusol does not kill the amœba, but only diminishes his desire to crawl. Motile bacteria quickly became immotile in the same eusol; it is advisable in after-treatment therefore to irrigate the cavity with a solution of quinine sulphate, 10 gr. to the ounce, after washing away the pus with saline or peroxide. In the after-treatment of a liver abscess the fæces should be examined for amœbæ, if these have been present earlier, as the patient is not cured of the disease if amœbæ are present in the fæces and a further course of emetine will be necessary.

Differential diagnosis mainly concerns malaria and the hepatitis accompanying gall-stones and typhoid. In malaria the finding of the parasite, enlargement of the spleen, and improvement with intramuscular injections of quinine bihydrochloride usually make matters clear, but in the East the patient may have both diseases.

In its early stage, before localising signs occur, an abscess of the liver may resemble typhoid, particularly when the leucocyte count is as low as 4700, as in one case; in more than one instance patients were observed for a week as doubtful typhoid before local signs of trouble in the liver occurred.

Prognosis depends on the time of diagnosis, treatment, and the amount of liver destroyed. It is astonishing how much liver can be destroyed and yet the patient recover; one patient had an abscess in his right lobe containing two pints of pus; another had at least one-third of his total liver substance destroyed by a gunshot wound and resulting suppuration; there was only a very slight liver shadow by X ray at the outer right third of his liver; he had an abscess from Poupart's ligament to scapula; he was emaciated and dangerously ill, but ultimately recovered sufficiently to be evacuated from Salonica to England, having put on a considerable amount of weight. In considering the prognosis, it must be remembered that a second abscess not uncommonly occurs months later, but I guess that this is less frequent since the introduction of efficient treatment with emetine.

Death-rate in this disease used to be very high; with the growth of pathology and surgery and the use of emetine the prognosis is greatly improved; in my small experience of 13 cases of abscess of the liver 5 were drained through the epigastrium and recovered, 7 were drained through the chest wall and diaphragm of which one died. He was very wasted and worn out on admission, and was unable to granulate and repair his abscess cavity; he lived 15 days after operation, and post mortem revealed no trouble other than the cavity of his abscess, efficiently drained, but with its walls necrotic, showing no signs of repair; one case was undiagnosed and died.

Three cases of hepatitis recovered who were all diagnosed clinically as amœbic.

Conclusion.

In conclusion, points of importance are:—

1. Often there is no history of diarrhœa or dysentery.
2. Often no amœbæ are found in the fæces, and even in fatal cases little or no ulceration of the bowel is found post mortem.
3. Fairly low temperature, pulse-rate, and leucocytosis are not always contra-indicative of the presence and quantity of pus.
4. The liver may not be enlarged downwards, or only slightly so, because of necrosis around the abscess occurring rather than the liver enlarging or being pushed downwards.
5. If the puncture fails to find pus in a case diagnosed clinically, an epigastric incision should be made in an attempt to get a scientific early diagnosis and treatment.
6. Drainage should be free, followed by daily sterile dressing and a course of emetine hypodermically.
7. The drainage-tubes should be removed as early as possible to prevent secondary infection and sinus formation.
8. Inflamed lung is liable to disguise inflamed liver below and beneath it.

LITERARY INTELLIGENCE.—Messrs. G. Bell and Sons announce for publication within the next fortnight Dr. Edridge-Green's new book on "The Physiology of Vision, with Special Reference to Colour-Blindness" (price 12*s.* net), and also the same author's "Card Test for Colour-Blindness" (price 25*s.* net).

INFLUENZAL PNEUMONIA:
THE INTRAVENOUS INJECTION OF HYDROGEN PEROXIDE.

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AND
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IN view of the possibility of a further outbreak of influenza accompanied by broncho-pneumonia, another method of combating the extreme toxæmia and anoxæmia appears to be worthy of record, more particularly so as the clinical importance of the latter has recently been discussed by Professor J. S. Haldane.[1] It is noteworthy that in his paper he lays especial emphasis on the primary need of oxygen *in solution* in the blood.

Theory Underlying the Treatment.

There occurred in Busrah in June and July, 1919, a severe epidemic of influenza, most marked among Indian troops, and accompanied in many cases by an exceedingly toxæmic and fatal broncho-pneumonia. It is unfortunately impossible to give statistics of the mortality of the epidemic, but its extent may be gauged from the fact that in one large Indian hospital in which the influenza cases were segregated in special huts the death-rate was over 80 per cent. in the pneumonia cases with toxic symptoms.

So useless were the usual remedies tried in this latter class of case that we felt justified in giving a trial to any method which held out a prospect of success. It had been observed by one of us (T. H. O.) some years previously that an ammoniacal solution of hydrogen peroxide had, in the presence of a catalyst (copper), a remarkable oxidising power on morphia.[2] Further investigation, as yet unpublished, showed that many other substances were similarly oxidised by this solution, the power of which appeared to depend primarily on the formation of nascent oxygen.

We thought that use might be made of this reaction if the H_2O_2 were given intravenously, in this instance employing the well-known catalytic powers of hæmoglobin as a substitute for the copper, and we hoped thereby, not only to supply oxygen to the tissues with greater rapidity than by the ordinary methods, but also to render the circulating toxins inert by oxidation. The obvious danger was gas-embolism, against which most text-books warn those using H_2O_2 even to wash out serous cavities. We believed, however, in the first place, that pure oxygen, if given sufficiently slowly, would be absorbed before any embolic symptoms developed, and secondly, that the air-embolism known to surgery is really a misnomer for nitrogen embolism.

Effect on Patients.

The first case was an Indian with broncho-pneumonia of influenzal origin and intensely toxæmic. He had been delirious for two days previously, and was selected as being the worst case in the ward and to all appearances moribund. Two ounces of a ten-volume solution of H_2O_2 were diluted with 8 ounces of normal saline, and the solution made slightly alkaline with 5 minims of liquor ammoniæ. This produced a faintly effervescing solution. The median cephalic vein was exposed by open dissection, and the solution infused through a glass cannula attached to a Rogers cholera apparatus.

The solution was infused very slowly, a complete stop being made for half a minute in every four. Small bubbles were allowed to enter the vein unchecked, but if a large accumulation of oxygen appeared in the cannula the transfusion was checked for about a minute until it had gradually entered the vein. The whole transfusion lasted for 15 minutes. The patient showed no signs of discomfort until towards the end of the operation, when he became slightly restless. This, however, passed off in a few minutes, and there were no other untoward symptoms except a moderate rigor which occurred two hours later. After the rigor the temperature, which had been 101·8°, fell to normal and remained so for 36 hours, when it again rose to 101°. The latter rise was not accompanied by toxic symptoms and the temperature gradually fell to normal in the course of the next ten days. The change in the mental condition was remarkable, the patient, who previously had had to be tied in bed owing to delirium, was within six hours of the injection sitting up and asking for food; he slept well the next night and from that time improved in every way, eventually being invalided to India as a walking case three weeks later.

Encouraged by the apparent success in this case, we tried the method on 24 others—cases of influenzal pneumonia—selecting always those whose condition was apparently hopeless. Of the total of 25 cases, 13 recovered and 12 died, a mortality of 48 per cent. Of the 12 who died, 9 showed no visible effect for either good or ill. In 3 there was a temporary improvement. One case only died within five hours of the infusion, during a rigor. One of the cases had four injections at intervals of three to five days without any sign of gas embolism, nor did we find any signs of such embolism post mortem. Of the 13 who recovered, 10 were delirious at the time of infusion and had to be held down in bed. Three were comatose from toxæmia.

The average respiration-rate before the operation was 46 per minute, the greatest being 60 and the least 28. Within 24 hours of the infusion the average rate was 31·5, the greatest fall being from 60 to 24. The noticeable feature, however, was a steadying and deepening of the respiration and a great lessening of the discomfort. The average pulse-rate before infusion was 118. 24 hours later the average was 98.

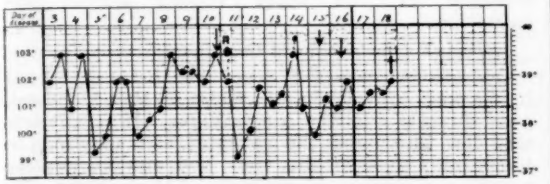
The temperature in this epidemic was, apart from complications such as malaria or effect of heat, rarely high and usually 101°–103°. In all cases but one the injection was followed by a rigor, after which (except in two of the cases) the temperature fell to normal. Of the two exceptions one remained with the same temperature as before, the other fell from 102° to 100°. The afebrile period lasted usually for 18–36 hours, after which the temperature again rose to 99°–101°, and fell by lysis in 4–7 days.

At this juncture we would point out that the occurrence of a rigor or a fall by crisis is exceeding rare in Mesopotamia in cases of pneumonia. Neither of us remember such an occurrence in an experience of 3½ years among British and Indian troops. As regards the toxæmia, we believe that the frequent occurrence of a rigor and a complete or partial crisis, combined with a rapid improvement in the patient's general and mental condition, indicated that this was overcome in many instances. Whether this was by merely supplying oxygen to devitalised tissues, or whether direct oxidation of the circulating toxins took place, it is not easy to say. It is difficult to believe, however, that so small a quantity of oxygen as is contained in

[1] Brit. Med. Jour., July 19th, 1919.
[2] Medical Chronicle, July, 1914.

Charts of Four Cases in which Hydrogen Peroxide was given Intravenously.

1



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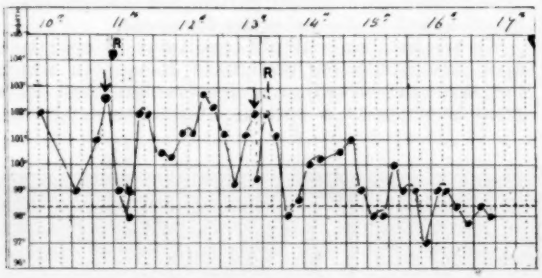

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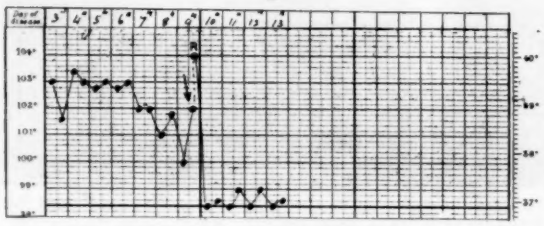

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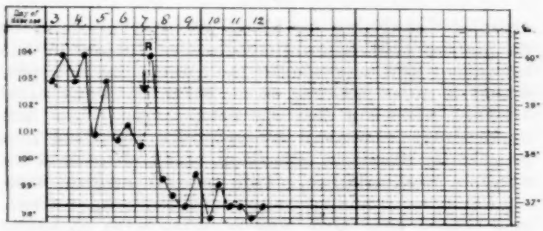


An arrow denotes an injection. R = rigor. The first case ended fatally, the others recovered.

2 oz. of H_2O_2 could produce these effects other than by its nascent oxygen, and this view is supported by a trial we made in a case of toxæmia arising from suppurating inguinal glands in which there was no question of anoxæmia. Here the general improvement which so rapidly took place could only be ascribed to direct oxidation.

The accompanying four charts will give some idea of the reactions obtained in one fatal and three recoveries; in the first it will be seen that four injections were given, the first two of which produced a rigor and temporary improvement. In the second two injections were given, each producing a rigor and some improvement both in pulse and respiration rate. In the third and fourth the injection was followed almost immediately by a rigor and subsequently by a crisis. In all these cases there was marked slowing of the respiration-rate after the injection.

Technique.

A strength of 2 oz. H_2O_2 in 8 oz. of normal saline was usually used. In one case 3 oz. H_2O_2 was used without any ill-effect. Fifteen minutes was allowed for transfusion and this was checked temporarily every four minutes, or whenever large bubbles of oxygen appeared in the cannula, or if the patient became at all restless. Small bubbles entering the vein did not appear to do any harm. In one case the patient struggled so violently in his delirium that the cannula slipped out and the distal ligature came off. On pressing the vein above two distinct streams could be seen to issue from the wound, the one above bright red and frothing, the other deep blue.

The epidemic ceased almost as suddenly as it had begun, so we were unable to try the method on earlier cases or to give a more extensive trial to repeated injections.

Conclusions.

From our experience we conclude that—

1. H_2O_2 can be given intravenously without gas embolism being produced.

2. The anoxæmia is often markedly benefited.

3. The toxæmia appears to be overcome in many cases.

4. The mortality (48 per cent.) compares very favourably with the 80 per cent. in similar cases not so treated, and more so when it is remembered that we only treated the most severe and apparently hopeless.

ANÆSTHESIA IN THROAT AND NOSE OPERATIONS.[1]

BY FELIX ROOD, M.B., B.S. DURH.,
ANÆSTHETIST, UNIVERSITY COLLEGE HOSPITAL.

[THE author pointed out that operations upor the ear, nose, and throat are not generally serious in themselves, and that it is, therefore, of primary importance that the technique employed should be as free from risk as possible. After dwelling on the risks of chloroform and mixtures containing it and the comparative safety of ether, Mr. Rood advanced the following arguments in support of his contention that "ether is the proper anæsthetic for operations upon the nose and throat."]

The Degrees of Anæsthesia.

It will be necessary to speak of two degrees of anæsthesia—deep and light. I should like to define what I mean by this. In deep anæsthesia the respiration is regular, automatic, and shallow, the larynx and pharynx are absolutely paralysed and immobile, and respond in no way to stimuli; the recurrent laryngeal nerve is paralysed and the cords stand in wide abduction. The pupil is generally dilated and does not react to light. All reflex activity of the pharynx and larynx is abolished, a Brünings tube can be passed into the larynx, and there is no interference with the quiet rhythm of respiration and no spasm of the cords. The patient in this condition can take no active part in his own operation, he cannot cough. On the other hand, he cannot obstruct his own respiration by laryngeal spasm. If this degree of anæsthesia is induced with ether the patient is pink and rosy, with a full regular pulse of about 80–91.

By light anæsthesia I do not, of course, mean a struggling patient. There is general muscular relaxation, the respiration is regular, but certain

[1] Abridged from a paper read before the joint sections of Anæsthetics and Laryngology of the Royal Society of Medicine on Feb. 6th.

reflexes persist, the pharynx and larynx respond with a muscular contraction if stimulated. The patient can cough—and so can in this way protect himself from blood entering the air-passages—on the other hand, he can obstruct his own air-way by spasm of the cords. I assume that, before the administration of ether, atropin sulphate has been injected hypodermically. The contrast in the clinical picture of ether anæsthesia with and without this drug is too well known to need discussion.

An Alternative Method to the Use of Clover's Inhaler.

There are many ways of inducing anæsthesia with ether, but in order to obtain this deep type a method must be used which is capable of giving a high concentration of ether vapour. So a modification of the so-called open ether method has been devised. It consists of extemporising a bag from a towel as the anæsthesia progresses, and converting the open ether into a semi-closed method, practically into a Clover inhaler, but capable of giving more ether and without the disadvantage of the absolutely air-tight and possibly septic rubber bag. This method is extravagant both of gauze and ether—a whole 6-yard roll of gauze being used for each case, and from 6 to 8 oz. of ether according to the physique of the patient. But it produces in from 6 to 8 minutes a type of anæsthesia that I believe can be obtained in no other way. It requires, of course, some little practice to get the patient under quickly and quietly, and success depends upon a regular increase in the strength of the vapour, so that the patient is always inhaling the maximum percentage of ether that will pass the larynx without producing spasm.

Dr. H. G. Butterfield has kindly taken the photographs here given from actual cases. The first shows the commencement of anæsthesia. The gauze mask, soaked with as much ether as it will conveniently hold without dripping, is gradually lowered to the patient's face. The second shows how a bag is improvised by means of a towel, and the third how the percentage of ether is finally concentrated considerably by means of a thick substance—in this case to emphasise the point I have used a blanket, but of course a thick towel would do equally well.

Now, although this looks like asphyxiating the patient, the practical fact is that when the respiration becomes shallow in the deep stage of narcosis the patient, although most profoundly anæsthetised, is pink and rosy, provided always that the even regular rhythm of respiration has not been obstructed by a too sudden increase of the strength of the ether vapour during the induction.

Special Application to Oto-rhino-laryngology.

Operations upon the nose and throat stand out in marked contrast to all others, in that blood can pass directly into the air-passages. It is this fact that has hampered the operator, as it may lead to hurry, may obstruct the view, and may necessitate a sudden alteration in position of the patient. No abdominal surgeon is ever called upon to operate upon a rigid and vomiting patient, nor is he generally handicapped by the necessity for speed.

We are familiar with old conditions of operation upon the mouth for malignant disease, in which the surgeon worked at a disadvantage and in a great hurry upon a patient sometimes struggling, certainly coughing up blood at intervals, and in danger of suffocation. Gradual evolution in the operative and anæsthetic technique has now produced a quiet patient, some form of mechanical air-way, allowing the operator ample time and opportunity to control hæmorrhage resulting in a practically bloodless operation, and a clear field for surgical manipulation. This general surgical principle may be extended to nose and throat operations, and I hold that this may be done with complete safety with some slight alterations in traditional methods.

Illustrating the concentration of the ether vapour. The patient is allowed to inhale ether from the open mask for the few minutes necessary to abolish consciousness. A bag is then gradually improvised from a towel, and finally the vapour is still further concentrated by means of some thick substance—a blanket has been used in the illustration.

As the technique of anæsthesia differs so materially in different cases, it will perhaps be an advantage to classify them according to the conditions present. For practical purposes we may consider that operations upon the ethmoid, intranasal operations for drainage of the frontal sinus, removal of portions of the inferior turbinates, and operations for drainage of the maxillary antra—both the intranasal and the radical Colber Luck operation, have one feature in common: blood is introduced directly into the nasal cavities and so into the naso-pharynx, whilst at the same time the patient's head is raised. It is obvious that gravity will allow blood to find its way directly through the larynx into the trachea and lungs. It appears that there are three alternative methods of preventing the blood entering the larynx:—

(1) To use light anæsthesia and allow the patient to cough up his own blood.

This is generally effective, but has disadvantages. The amount of blood collecting in the pharynx may become great, necessitating the interruption of the operation in order to mop it out. Furthermore, I have seen blood sucked into the trachea even with a coughing patient.

(2) To shut off the nasal cavities from the pharynx by means of a well-fitting post-nasal plug—using at the same time one of the many forms of mechanical breathing tubes, of which Hewitt's air-way is a type, in the pharynx.

There is an objection urged against this procedure. It is said that a post-nasal sponge, by preventing the blood running into the pharynx and confining it to the nasal cavities, causes it to flow from the nostril, so obscuring the view of the operator. But although it may sometimes be an inconvenience, if the blood is not confined to the nasal cavities it will run through the posterior nares into the pharynx, possibly slightly adding to the danger of the operation however lightly the patient may be under; and, furthermore, it will certainly make the patient cough and by collecting will once more introduce the necessity for a speedy completion of the operation. The advantage gained by the opportunity of a leisurely completion of the operation, with a patient who is absolutely safe from suffocation, even if it does increase the amount of mopping through the nostril, outweighs the transitory gain of a few moments' clear view, accompanied by an increasing collection of blood in the pharynx, which may at any moment give rise to a surgical emergency.

(3) The third method of preventing blood entering the larynx in those operations where the patient is in the raised position is by using the intratracheal insufflation of ether.

That it prevents blood entering the air-passages is admitted; it maintains an even regular degree of anæsthesia—and a mechanically perfect air-way whatever the position of the head. It will be interesting and instructive to hear the opinion of those who have used this machine for these cases. Personally I think that for operations upon the maxillary antrum for malignant disease or even for the radical drainage operation it is almost ideal—but for the more delicate intranasal operations I have noticed that the return blast of air through the nostril churns up the blood and appears to cause the operator more inconvenience than a post-nasal plug. I have often used this machine in conjunction with a post-nasal plug, which prevents the air blowing through the nostril, but the apparatus is bulky for universal use in operations of this nature, and I think that the results obtained with a post-nasal plug and an air-way are equally, if not more, satisfactory.

Anæsthetic Technique in the Removal of Tonsils and Adenoids.

The next anæsthetic technique which I wish to consider is associated with the removal of tonsils and adenoids. I know that there is considerable difference of opinion upon this subject. It is apparent that the type and degree of anæsthesia to be used is intimately connected with the nature of the operation performed, and it is in this operation, I think, more than in all others, that a sympathetic coöperation between the operator and anæsthetist is essential in the interests both of safety and efficiency. I have said before that I personally believe ether should be used as the anæsthetic. That it is safer than $CHCl_3$ cannot be denied. That any degree of anæsthesia can be produced and continued with ether and ether only in the most vigorous adult is a fact that can be verified at any time.

There are, from the anæsthetist's point of view, two methods—one with light anæsthesia, the other with deep anæsthesia.

The first, which I will describe as the rapid method, consists in the removal of both tonsils with the reverse guillotine, the patient either lying on his back or sitting up. After removal the patient is quickly turned into such a position that the blood may drain out of the mouth. Some operators remove the tonsil with the patient lying upon the side.

In the second type of operation a profound degree of anæsthesia is used. Mechanical means are adopted to prevent the entry of blood into the air-passages. The tonsils are removed either by the reverse guillotine or dissection. All hæmorrhage is stopped before the patient leaves the table, as in other surgical operations. This necessitates a modification in the traditional position. It was found essential in the interest of safety that gravity should no longer carry blood into the air-passages. To adopt that general principle of operative surgery of the mouth that if the advantages of a deep anæsthesia, together with a quiet field of operation and opportunity for a leisurely performance, are to be enjoyed some mechanical means must be employed to keep blood out of the air-passages.

In the operation under discussion this is secured in a simple manner. The shoulders are raised upon a sand-bag. The head is allowed to fall back and rest upon the vertex in such a manner that the front of the chest, the front of the neck, and the chin are all in one straight line. This position places the larynx well above the field of operation and converts the naso-pharynx into a dependent receptacle. In this position, and only in this position, deep anæsthesia may be used either for enucleation by dissection or by the reverse guillotine. The surgeon has all the facilities for which he asks—a perfect view, ample time, an immobile field of operation, and every opportunity to stop hæmorrhage. The pros and cons of the different types of operation are entirely a surgical matter, but the question of safety of the various procedures is relevant to the subject under discussion. The originators of the method adopted the position widely used for similar operations, such as those for cleft palate and for removal of small parts of the tongue. These are essentially the same as tonsil operations, and the conditions are identical. The operations used to be performed with the head slightly raised, causing considerable discomfort to the anæsthetist, together with much mopping and coughing. But a cleft palate operation in the head back position presents no difficulty or danger; the surgeon sitting behind the patient has ample time and perfect vision for a somewhat tedious operation. An occasional mop prevents blood collecting in bulk in the naso-pharynx. The patient is under, with even regular respiration, the palate is still, there is no anxiety or difficulty for the anæsthetist.

It is the same thing with the tonsil operation. Carried out by two people who are conversant with the details I do not think it is too much to say that it is mechanically perfect, and that if blood does enter the larynx it is due to a failure of technique and not to a defect in the principle of the method.

The Anæsthetic in Examinations of the Larynx, Trachea, and Œsophagus.

Another group of cases in which the anæsthetic plays a considerable part comprises direct examination of the larynx, trachea, and œsophagus by means of tubes. It seems to me that a profound anæsthesia is essential for these cases, anæsthesia so profound that the cords stand abducted, even in the presence of a tube in the upper opening of the larynx. Spasm of the cords and contractions of the pharynx are the difficulties the operator has to contend with, and I do not think it is too much to say that some of the delicate intralaryngeal manipulations are impossible should this persistently occur. Again, I think ether is the proper anæsthetic to employ. It is sometimes necessary, especially with an irritable larynx, to push it to an extreme degree, almost to the cessation of respiration.

Finally, there are operations upon the larynx for the removal of intrinsic carcinomata. From the anæsthetist's point of view the conditions present are precisely the same as in cases of malignant disease of the upper opening of the larynx, pyriform fossæ, &c. The air-passages are more or less obstructed by a tumour. There may be stridor, and there is possibly definite respiratory obstruction. But here we have a very different state of affairs compared with most other operations upon the nose and throat. The cases are of a really serious nature. An anæsthetic must be given, possibly in the presence of obstructed respiration, in order that a preliminary tracheotomy may be performed.

Now, if ether is administered to these patients, the rise of blood pressure during the induction may cause slight swelling of the mucous membrane and completely occlude the already narrowed airway, with the result that we have an asphyxiated patient, an emergency tracheotomy upon a patient not properly under, much explosive coughing upon the introduction of the tracheotomy tube, with possibly the aspiration of blood and septic matter.

Therefore I think that $CHCl_3$ is undoubtedly the proper anæsthetic, because in the broad sense it is safer than ether in these special cases. A degree of anæsthesia must be maintained sufficiently deep to permit the tracheotomy tube to be introduced without producing reflex coughing, because pneumonia following aspiration of septic matter is a very definite danger, and a proper degree of anæsthesia will always ensure a peaceful tracheotomy.

Summary.

In summing up I may say I have endeavoured to uphold the safety of ether; the danger of $CHCl_3$ as demonstrated, apart from all scientific considerations, by the records of the daily press; the improvements in the methods of administering ether so that the congestion, cyanosis, and salivation of other days have given place to an anæsthesia which has all the merits and none of the dangers of chloroform; and the gradual evolution of operative surgery of the mouth, from the rapid operation and coughing patient towards the ideal of a quiet patient free from all risk of suffocation, combined with every facility for a thorough and deliberate operation.

THE GILLSON SCHOLARSHIP FOR RESEARCH IN PATHOLOGY.—The Society of Apothecaries has awarded the Gillson scholarship for original research in pathology, of the annual value of £105, to Dr. A. L. Urquhart, of St. Thomas's Hospital.

A CASE OF HIRSCHSPRUNG'S DISEASE,

CAUSING ACUTE OBSTRUCTION.

BY I. TEWFIK, M.R.C.S.ENG., L.R.C.P.LOND.

THE following case is of interest both from the point of diagnosing the condition, which is rare, and also from the point of being simulated by an acute obstructive condition which seldom manifests itself in cases of Hirschsprung's disease. The method adopted in the operative technique is to my mind the most suitable, as it alleviates the shock, and gives a chance to the affected colon to recover and decrease in size—two essential factors in the success of the anastomosis after the resection.

S. L., aged 10, was admitted to hospital on Oct. 27th, 1918, with symptoms of acute intestinal obstruction. Temperature 99° F.; pulse 120, rather feeble. He had been vomiting two days previously.

Previous history.—Five years ago he was admitted to one of the London hospitals, because "the child was always delicate, his stomach was getting bigger, and his bowels very constipated." Often his bowels did not act for a week or ten days. He was in hospital then for about six months with no apparent benefit.

Examination.—The child looked ill, with a furred tongue and the anxious expression indicative of an acute abdomen; his abdomen was protuberant and hard, especially in the lower half. On percussion a dull note was elicited over the greater part of the lower abdomen. The child otherwise looked quite normal.

Operation.—I decided to operate at once and the abdomen was opened through a right paramedian incision. The condition suspected was revealed straight away; in the abdomen was a reddish-blue mass which looked like a twisted ovarian cyst. The tumour really consisted of the descending and pelvic colons greatly distended and full of fæces; the colour was due to the stagnant fæces infecting the bowel wall. I decided to relieve the obstruction first and give the distended and infected diseased colon a chance to improve, and also to lessen the shock of the operation, a matter of vital importance. Through a left gridiron incision I brought out the proximal end of the descending colon, which was quite healthy, after cutting it away from the rest. The distal end was closed up securely with sutures and returned into the abdomen. By the help of my assistant, who dilated the rectum, I was able to empty the contents of the diseased colon. A Paul's tube was inserted in the colotomy. The child was infused through the axilla during the operation. Daily rectal washouts were given to disinfect the colon, which was obviously in an infected condition, and the child made an uninterrupted recovery. On Dec. 3rd I decided to complete the operation. The abdomen was opened through a left paramedian incision; subcutaneous saline infusion was given in the axilla. The diseased colon was found to have decreased in size and was in a much healthier condition. It extended far down in the pelvic colon, which made the resection and the subsequent end-to-end anastomosis rather tedious. The abdomen was closed in the ordinary way and a drainage-tube inserted through the old colotomy incision. Before closing the abdomen a stomach-tube was passed from the rectum past the anastomosis. The bowels acted regularly on the third day, and then daily afterwards till the ninth day, when fæces were noticed to appear through the old colotomy wound. The patient ran an irregular pyrexia for three weeks, beginning one week after the operation. His bowels still acted normally every day while the fæcal fistula was discharging, some days more than others. The fistula eventually closed entirely on March 27th, 1919, and remained closed till his discharge on May 19th. His bowels since the second operation acted normally and regularly every day; the child improved considerably, putting on weight, and looked altogether different. I have recently heard that his fistula broke down, but I presume it will soon close up again.

Rochester.

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

WAR SECTION.

GAS POISONING.

A MEETING of this section of the Royal Society of Medicine was held on Feb. 9th, when a discussion was opened by Sir WILMOT HERRINGHAM on Gas Poisoning. The paper appears in the present issue of THE LANCET.

Three Phases of Gas Warfare.

Dr. C. G. DOUGLAS divided gas warfare into three phases: (1) the attacks with gas clouds (chlorine and phosgene) liberated from cylinders in 1915 and 1916; (2) bombardments with shell containing "lethal" gases—e.g., phosgene and diphosgene—July, 1916, to July, 1917; (3) the mustard-gas period, July, 1917, to the armistice, when shell containing either mustard gas, lethal gases such as phosgene, or irritant organic arsenic compounds were employed. During the first two periods the number of gas casualties was by no means excessive, paying due consideration to the magnitude of the attacks and the nature of the gas used. The average mortality amongst the gas casualties was higher in the case of the cloud-gas attacks than in the bombardments with lethal gas shell, the difference being due in part to the progressive improvement in defensive measures against gas, and in part to the fact that gas-shell bombardments were a somewhat ineffective method of delivering the poisonous gas in comparison with the liberation of gas from cylinders. During the last phase of gas warfare mustard gas was responsible for most of the gas casualties, but though the number of gas casualties was large the mortality amongst them was extremely low. In the case of mustard gas, therefore, the main problem of the medical officer is to cope with the great number of gas casualties, and to endeavour to reduce the period necessary for convalescence by improvements in treatment so as to minimise the wastage of man-power. In chlorine or phosgene poisoning the medical officer's hardest task is to tide the case over the acute stage of pulmonary œdema during the first 48 hours after exposure to gas.

Histology and Pathology of Gas Poisoning.

Dr. J. W. MCNEE said he would deal with the subject in the way Sir Wilmot Herringham had suggested might be useful. During the whole period of the war his attention had been focussed entirely on the pathology of gas poisoning, but now it was interesting and important to try to correlate some of the late symptoms with what might be expected to result from the lesions found in the acute stages. He therefore proposed to sum up in a few words the main effects noted in acute cases of chlorine, phosgene, and "mustard-gas" poisoning; thereafter, to indicate the chronic changes which might be expected to follow in the severer cases; and finally, to refer to the actual symptomatology of men now receiving pensions for ill-health on account of gassing. He said that chlorine was a completely irrespirable gas, producing local irritant effects only in the respiratory tract, without any distal action. In the lungs the lesions were extreme disruptive emphysema and intense œdema. During the recovery stage bronchitis was of frequent occurrence. Any late effects might be expected to be due to the emphysema and to the bronchitis. Phosgene produced effects beyond the pulmonary system, in contrast to chlorine. Some of these effects could be studied histologically, but others had never been explained. Phosgene exerted some serious depressant action on the heart, and, in contrast to chlorine, sudden deaths from cardiac failure were well known. Moreover, "grey cases" were much commoner after phosgene than after chlorine. In the lungs phosgene gave rise to great emphysema (not so disruptive as with chlorine) and extreme œdema. The bronchial mucous membrane was little affected, unless sepsis was added, as was common, in the stage of recovery. Another change noted was the occurrence of hyaline thrombosis in the pulmonary capillaries, and thrombosis was also observed in some instances in the glomerular capillaries of the kidneys, and in the capillaries of the white matter of the brain. In the last position the thrombosis was associated with multiple small hæmorrhages. Any late effects of phosgene poisoning might be expected to be due to the pulmonary emphysema, to the effect on the heart, noted clinically, but of unknown ætiology, and perhaps to some of the other distal lesions which have been noted. Mustard gas induced lesions of quite different character from the other two gases. The changes in the lungs were alone of importance for late effects. After a period of incubation (accounting for the absence of deaths on the first day, as shown on Colonel Douglas's chart), necrosis of the mucosa of the trachea and larger bronchi took place, followed by the pouring out of a fibrinous membrane very similar to the membrane in diphtheria. This fibrin afforded suitable nourishment for micro-organisms, the abundant growth of which induced intense septic bronchitis, and often broncho-pneumonia, &c. Œdema and emphysema were not features of mustard-gas poisoning. The late effects might be expected to result almost entirely from the extreme damage of the walls of the trachea and bronchi. The speaker then referred very briefly to some of the symptoms complained of by pensioners. They agreed closely with those to be expected from a study of the acute lesions, consisting chiefly of recurrent bronchitis, breathlessness, and tachycardia. Physical signs to account for the symptoms were not readily elicited. Reference was also made to the condition studied by the French writers, Achard and Flandin, who have described a "pseudo-tuberculosis" associated with purulent sputum and ill-health, but where tubercle bacilli could never be demonstrated in the sputum. They ascribe the symptoms to a fibrosis of the tissues surrounding the bronchi.

Dr. McNee passed round a specimen showing multiple small circular cerebral hæmorrhages.

Tribute to Scientific Workers.

Colonel S. L. CUMMINS paid a warm tribute to the work of the late Professor W. Watson, and of Professor J. S. Haldane, Professor H. B. Baker, Captain C. G. Douglas, Captain Mouat Jones, and Captain S. J. Auld, whose "magnificent services were instrumental in bringing anti-gas defence to the high state of efficiency which was ultimately attained." He considered that Sir William Horrocks "accomplished miracles in producing in the shortest possible time the vast number of masks, helmets, and respirators that were required by the armies in France." Colonel Cummins went on to say: "It was soon evident that anti-gas defence was not a medical service, *not* a service of the kind that should work under the Adjutant-General, but a branch of warfare affecting the integrity of the battle-line; obviously a function of the General Staff. The Gas Directorate was formed under the command of General Thuillier, R.E., in which Colonel Foulkes, while retaining command of the Special Brigade, served as Assistant Director of Gas Services for Offence, while I was appointed Assistant Director for Defence. In this way a great service for gas warfare in all its branches came into existence, and its subsequent history is bound up with the general history of the war. But while I hold strongly that gas warfare in its defensive as well as its offensive aspects must be a function of a special force of scientific soldiers working under the General Staff, I hold equally strongly that the medical and physiological organisation for dealing with gas cases and investigating the effects of gases must be under the Director-General of the Army Medical Services. The knowledge gained by such an organisation is essential to the Director-General and also to the General Staff—to the one in order that everything possible may be done for gas casualties; to the other because it is necessary to know the effect of gases on man and animals when the question arises of which gas to use against the enemy."

Therapeutic Value of Bleeding.

Professor J. S. HALDANE, F.R.S., considered that clinical evidence was of even greater value than laboratory experiments, and he held the opinion that bleeding

was of very considerable therapeutic value in those cases of blue asphyxia with engorgement of the veins, as high venous blood pressure favoured the development of œdema of the lungs. The blueness was simply due to anoxæmia, and there was no decomposition of the hæmoglobin. In "grey" cases with no distension of superficial veins obviously no benefit from bleeding was to be expected. Blue asphyxia was more common in the immediate cyanosis following chlorine gassing and grey in the delayed œdema of the lungs following phosgene gassing. To reach the blood the oxygen has to pass through the delicate layer of alveolar epithelium and capillary wall which separates the blood from the air, and the reason why the blood was not properly oxygenated in gas cases was presumably that with the swelling and exudation, and paralysis of secretion by injury to the cells, the oxygen could not get through to the blood quickly enough to saturate it to the normal extent. He considered that the second, and by far the most effective, means of treatment is the administration of pure oxygen in a suitable apparatus. In chlorine cases, owing to the bronchitis, emphysema, and corresponding areas of relative collapse, there is probably an excess of CO_2 in the arterial blood, while in the phosgene cases there is no such excess. In any case the symptoms, apart from the local signs of œdema of the lungs, resemble those of the uncomplicated anoxæmia of very high altitudes.

Sir WILMOT HERRINGHAM, in reply, opposed Colonel Cummins's opinion that anti-gas defence was a function of the General Staff. On the contrary, he considered that no scientific work in a medical sense should be under the General Staff, as their knowledge of even elementary science was often so limited as to be humorous to a medical man, and he proceeded to illustrate this by several anecdotes, the truth of which he guaranteed.

CLINICAL SECTION.

EXHIBITION OF CLINICAL CASES.

A MEETING of this section of the Royal Society of Medicine was held on Feb. 13th, Sir ANTHONY BOWLBY, the President, being in the chair, when there was an exhibition of clinical cases.

Thrombo-angeitis Obliterans.

Dr. W. SALISBURY-SHARPE showed a case of Thrombo-angeitis Obliterans in a male Jew aged 23 years. There had been constant pain, worse at times, both in the hands and feet, and destructive changes had led to the loss of part of the ring and little fingers of the right hand, of the corresponding fingers of the left hand, and of several toes. The disease had started at 3 years of age. Radiograms showed, in addition to the loss of the ungual phalanges and of part of the middle phalanges in the affected digits, rarefactive changes, more marked in the feet than in the hands.

Dr. F. PARKES WEBER said that in this case the pulsation in the dorsalis pedis artery in both feet was very good, and that fact in itself, in his opinion, was sufficient to negative the diagnosis of thrombo-angeitis obliterans. He showed the same patient before this section on Nov. 14th, 1913, as an example of angiokeratoma with bony changes.[1] The patient was then aged 16 years, and since the age of 4 had suffered from chilblains on the hands and feet and pinnæ of the ears, which had left a good deal of scarring. The Wassermann reaction was negative. He remarked at the time that the chilblain condition ordinarily associated with angiokeratoma of the hands and feet seemed to be insufficient to account for the bony changes revealed by X ray examination.

Sir JAMES GALLOWAY said that angiokeratoma was not usually so severe, and he had never seen the bony changes in connexion with it. He favoured the original diagnosis.

The PRESIDENT pointed out that the feet and hands were warm and not cold and blue, as would be expected in circulatory defects.

[1] Proceedings of the Royal Society of Medicine, Clinical Section, 1913-14, vii., p. 25.

Mr. N. C. LAKE spoke of a case of thrombo-angeitis obliterans in a Polish Jew, aged 36, for whom it had been necessary to amputate through the centre of the thigh. He was a tailor and a heavy smoker. The Wassermann reaction was negative. The main arteries were seen to be about half the normal size. Sections of the popliteal and of the anterior and posterior tibial arteries were shown.

Unilateral Sweating of the Face.

Dr. G. DE B. TURTLE showed a case of Unilateral Sweating of the Face, which was previously shown before the section at the December meeting. The man had since developed a paresis of the external rectus of the right side, producing diplopia. A Wassermann reaction was negative, but there was a definite history of syphilis contracted some 20 years ago. He had therefore been treated with antisyphilitic remedies with considerable improvement, and at the same time the sweating had diminished; the case was again brought before the section in view of a possible connexion between the two conditions.

Unilateral Dwarfism of Limbs.

Dr. PARKES WEBER showed a case of Unilateral Dwarfism of Limbs connected with Congenital Chondromata. It was not generally recognised, he said, that the presence of congenital chondromata in long bones might be in some way causally connected with dwarfism of the limbs in question. The patient was a healthy boy, aged 13 years, whose only abnormality was that his right limbs were abnormally short and somewhat deformed. From the acromion to the tip of the styloid process of the radius measured on the right side 35 cm., on the left side 45 cm. From the great trochanter to the tip of the external malleolus on the right side the measurement was 50 cm., on the left side 67 cm. Skiagrams taken in January, 1920, showed the presence of a large chondroma at the lower end of the right tibia and of chondromata in the right ulna and right radius. There was bending of the right fibula, doubtless due to pressure from the tibial chondroma. There was no history of any similar condition in the patient's family. According to the mother nothing abnormal was noticed in the patient at the time of his birth, except a peculiar mottling of the skin of the right upper and lower extremities. The shortening of the right limbs was not observed until the boy was 1½ years old. One or two orthopædic operations had been attempted. In January, 1920, there was a fracture of the right forearm from a fall. An almost exactly similar case in a boy, aged 6 years, was recently shown at the Section for the Study of Disease in Children by Mr. J. E. Adams as a case of shortening of the limbs on one side of the body.

Myxœdema with High Blood Pressure.

Dr. PARKES WEBER also showed a case of Myxœdema with High Blood Pressure, preceded by enlargement of the thyroid gland. The patient, a woman aged 55½ years, had still the typical appearance of myxœdema, but, under thyroid treatment lately, she had been losing in body weight, and her face had become thinner, whilst her speech was quicker, and she was less sluggish in her mentality. Her symptoms had commenced about seven years ago, rather more than a year after her menopause. She at first complained of a feeling of stiffness in her feet. The thyroid gland was observed to be enlarged six years ago, and it was still decidedly large, but appeared smaller than it had been. There had been no symptoms of Graves's disease. She complained much of a kind of acroparæsthesia in her fingers and toes. The Wassermann reaction was negative. More observations were required with regard to the blood pressure in cases of myxœdema. In the present patient the brachial systolic pressure was 210–240 mm. Hg.

Pityriasis Rubra Pilaris.

Dr. PARKES WEBER also showed a case of Pityriasis Rubra Pilaris (generalised form). The patient, aged 54 years, was a strongly built man. His case was a typical example of generalised pityriasis rubra pilaris (Devergie), the "lichen ruber acuminatus" of Kaposi. The disease commenced in October, 1919, with itching

all over his body. On the previous night he had partaken of sardines and brandy. During the two preceding years he had suffered a good deal from dyspeptic pains. The eruption was of the characteristic grater or goose-skin type on the trunk and upper extremities, and there was diffuse keratosis on the palms of the hands and on the feet and legs. On the scalp the eruption had a somewhat seborrhœic appearance. The patient was apparently improving. He had lately been treated by thyroid extract, liq. arsenicalis, and an alkaline sodium salicylate mixture, with hot baths for the pruritus.

Mr. R. P. ROWLANDS showed a case of

Gastro-jejuno-colic Fistula.

A gastro-jejunostomy had been performed by another surgeon for symptoms of duodenal ulcer. A year and a half later there had been a second operation for suppurating appendicitis and three years later gastro-jejuno-colic fistula followed, with acid diarrhœa, vomiting, eructation of foul gas, and wasting. X ray examination showed that the gastro-jejunostomy opening was too high, but failed to disclose the opening from the colon to the stomach. A barium enema, however, and subsequent X ray examination, showed the presence of barium in the stomach contents. At the operation the gastro-jejunostomy opening was not small, but the proximal limb of the jejunum was six inches long and greatly distended. Now, four and a half years later, the patient was practically well. Gastro-jejunal ulcer followed gastro-jejunostomy in about 1·4 per cent. of cases, but gastro-jejuno-colic fistula was much rarer. He had only seen three examples and only one of the patients was alive. In one of these the fistula communicated also with the ileum. In two-thirds of the cases of ulceration following gastro-jejunostomy the ulcer was in the jejunum; in one-third at the gastro-jejunal ring. In these colic cases it was in the ring. He emphasised the need for care and suitable dieting of patients after gastro-jejunostomy had been performed, a care which should extend over two to three months.

Dr. WILFRED HARRIS showed a case of

Bilateral Destruction of the Gasserian Ganglia by Alcohol Injection for Chronic Trigeminal Neuralgia.

The patient, a woman aged 49, began to suffer 15 years ago from spasmodic pains on the right side of the face commencing in the upper jaw and spreading to the lower jaw and temple. At first there were remissions of the pain, perhaps for a few months, but the spasms became more frequent and severe in the latter part of 1912, the pain occurring every few minutes and keeping her awake. With the neuralgic spasms she used also to have well-marked right facial spasm, with the exception of the oral muscles and the platysma, and by rubbing the skin of her face during the paroxysms of pain she had rendered that of the lower portion of the cheek and chin on that side almost horny, and had rubbed away the outer half of the right eyebrow. Early in 1913 she had been admitted into hospital, and at that time had no teeth in either right jaw; the sensation of the face was perfect, with no true hyperæsthesia, though she was afraid of light touches starting the painful spasm. In February, 1913, at the late Dr. F. E. Batten's request, Dr. Harris had injected the right foramen ovale under chloroform, by the usual route beneath the zygoma, using 1·75 c.cm. of 80 per cent. alcohol. As a result she had complete right fifth nerve paralysis, motor and sensory, with loss of taste on the anterior two-thirds of the right side of the tongue. Slight keratitis developed after a week, and the eyelids were sewn up for six months. After opening the eyelids again it was seen that the cornea had remained perfectly healthy. There had been no return of neuralgia on the right side and the anæsthesia had remained permanent and complete. The motor root, however, recovered, so that the right masseter, pterygoids, &c., recovered well. Five and a half years later, in August, 1918, there was a recurrence of neuralgia on the left side in the cheek and upper jaw. She stated that she had had "a queer feeling" in the cheek for some months, but no pain until July, when a severe twinge seized her in the upper gum, spreading into the temple and side of the nose. A touch on the lower lip, talking, or eating would start it. Examination showed that the right fifth area was totally anæsthetic, with right-sided loss of taste as before, though the masticatory muscles had recovered fully. He then injected her left foramen rotundum with 90 per cent. alcohol, using the route in front of the coronary process behind the antrum and through the pterygo-maxillary fissure. Fairly deep anæsthesia of the second division of the fifth was produced, and she was free from neuralgia until November, 1919, when it recurred after 16 months. In December it was decided to destroy the left Gasserian ganglion by alcohol injection, in order to give her permanent relief. This was a feasible operation owing to the recovery of the right masticatory muscles, though bilateral gasserectomy was an impossible operation owing to the permanent jaw drop which would be produced from the destruction of the motor branches of both fifth nerves. Using novocaine anæsthesia only, he injected the left Gasserian ganglion with 90 per cent. alcohol, and produced total left fifth nerve palsy, motor and sensory. The left eyelids were closed with strapping at once, and by washing out the conjunctival sac twice daily for ten days the cornea had remained quite healthy. At present there was total anæsthesia of the whole of the front half of the head and face owing to the bilateral ganglion destruction, and she could taste nothing at all until she began to swallow, when she appreciated taste quite keenly. There was no perception of taste whatever on the front portion of the tongue, but she could at once recognise salt, sweet, or bitter with solutions placed on the back of the tongue or fauces. The case was a good illustration of the undoubted fact that in the majority of subjects taste sensations are conveyed to the pons from the anterior two-thirds of the tongue by the fifth nerve and not by the pars intermedia Wrisbergi, the so-called central prolongation of the chorda tympani.

Dr. S. A. K. WILSON, in congratulating Dr. Harris on the result, pointed out the obvious practical advantage of the method over double gasserectomy. There was clearly no loss of muscle sense, and it appeared that the muscle afferent fibres must run in the seventh nerve.

The PRESIDENT said that several years ago he had seen a young officer suffering from causalgia following injury of the median nerve. As the result of a small injection of alcohol the pain went, but after three years there was still loss of motor power. He asked what was the experience of neurologists with regard to injection of a mixed nerve.

Dr. HARRIS, in his reply, stated that he had had some experience of injection of mixed nerves during the war, and had found that complete destruction had been necessary to banish the pain. Recovery of motor function during the time that they were under observation had not been satisfactory.

Dr. WILSON showed two cases of

Symptomatic Paralysis Agitans following Encephalitis Lethargica.

The first was that of a girl, aged 17, who in February, 1919, had influenza. A week later nocturnal delirium was followed in the morning by diplopia and headache, stiffness and weakness in the arms and legs. Two days afterwards ptosis, lasting three weeks and lethargy lasting two months, supervened. The memory was good for events which happened during this state. Rigidity began while she was in bed, and increased for a time after she got up. She could neither walk nor eat quickly. Involuntary movements of the jaw and left arm occurred during the early part of the illness; those in the jaw persisted. When shown, the cerebration and memory were normal. Phonation was weak and monotonous, and articulation slow. Special senses normal. The pupils were central and circular, and there were spontaneous nystagmoid movements and slow punctate lateral deviation of the eyes, but no diplopia. Slight trismus was present and involuntary chewing movements of the jaw, but there was no sensory loss over the distribution of the fifth nerve. The face was symmetrically immobile, with a spastic smile. There was some spasticity of the

tongue. Sensation was not impaired. General rigidity was accompanied by a maintenance of the upper limbs in the attitude of Parkinson's disease. There were no involuntary movements other than those of the jaw, but there was slight tremor of the right hand. The gait and general attitude were that of marked Parkinson's disease. Knee-jerks were obtained with difficulty and ankle-jerks were absent.

In the second case, that of a man over 20, encephalitis lethargica occurred in December, 1918. The symptoms gradually disappeared and the patient's condition became that of a typical symptomatic paralysis agitans. Dr. Wilson said that recent work had shown that the lesion of paralysis agitans was situated in the corpus striatum and subthalamic region. He could only suppose that the effects of encephalitis lethargica reached to the depth of these regions.

Dr. WILSON also showed a case of

? Polyneuritis Cranialis.

The man, aged 50, complained first of pain in the right ear and tenderness over the mastoid in September, 1918. Two weeks later he developed broncho-pneumonia, with unconsciousness for some days. On recovery of consciousness the pain had disappeared, but he was deaf in the right ear and the right face was paralysed and "dead." He was unable to swallow and was nasally fed for eight weeks. There were headache in the parietal region and occasional vomiting after food. Diplopia was present, but vision was otherwise good. The right shoulder ached and was wasted. His speech was whispering. Since then swallowing had improved, but fluids occasionally regurgitated through the nose, and he could not swallow solids. Phonation was better, but not normal. There was occasional bi-temporal headache. Vision had deteriorated, especially in the right eye, but the diplopia had diminished. There was some weakness of the sphincters. At present the sense of smell was greater on the right side than the left. Taste was lost. Middle-ear deafness was present on the right side. The visual fields were normal and visual acuity good. With regard to the other cranial nerves, there were hypoæsthesia to touch and pain over the middle division of the right fifth, weakness of the right external rectus with diplopia on looking to the right, complete paralysis of the right seventh with wasting, paralysis of the right constrictors of the pharynx with "curtain movement" of the pharynx from right to left, right hemi-palsy of the larynx with defective phonation and paralysis of the right half of the palate, paralysis and wasting of the right sterno-mastoid and trapezius muscles, and paralysis, wasting, and fibrillation of the right half of the tongue, with paresis and slight wasting of the left half. Dysarthria was also present. All the cranial nerves on the right side from the seventh to the twelfth were affected.

A Case of Nerve Disease for Diagnosis.

Dr. J. WALTER CARR showed a case of Nerve Disease for diagnosis. The patient was a boy, aged 8, whose present illness began insidiously in June, 1919, with unsteadiness of the legs in walking and some loss of strength in the left arm. He had been getting gradually worse since. There was no headache or vomiting. He was now unable to stand or walk on account of the persistent tonic spasm of the right leg, leading to flexion of the hip and thigh and extreme extension and inversion of the foot, which was in the position of pes cavus. The left leg showed a much slighter degree of spasm. The spasm persisted during sleep, relaxed under anæsthesia, but returned before consciousness was regained. The plantar reflexes were difficult to obtain, but were probably flexor. In the left arm there was some muscular spasm (increased by attention) and slight weakness. The boy did not use it much. The right arm appeared to be normal. There was some weakness of the back muscles, with a tendency to lateral curvature of the spine. The tongue could not be protruded for more than about half an inch, and speech was very blurred and indistinct. Sensation was probably unaffected. The boy had lately had occasional loss of control over the sphincters and his intelligence was perhaps not quite up to the normal for his age. There were no ophthalmological changes. The Wassermann reaction was negative both in the blood and cerebro-spinal fluid; the latter fluid was normal in all respects.

Mr. A. H. TODD showed a case of Sarcoma of the Clavicle in which the whole clavicle had been removed. The man suffered from no disability.

Dr. H. BATTY SHAW showed a case of

Malignant Endocarditis Affecting the Pulmonary Valve.

The patient, a youth aged 16½ years, had been admitted to hospital with a history that he had been troubled with "heart complaint" for two and a half years, his symptoms being palpitation and shortness of breath on effort. Previous to that he had had no illnesses of any kind. On admission to hospital in December, 1919, he stated that he had developed pain over the heart during the previous four days. His mother was said to have had consumption, but was now well again; his father, brother, and two sisters were quite well. While in the hospital he had had fever almost continuously of a remittent and intermittent character, the maximum being 104° F.; the pulse varied from normal to 120, and the respiration from 24 to 30. He had always been of pale complexion, and during his stay in hospital had lost weight, being now 2 st. under weight. The blood examination showed secondary anæmia, and 5500 leucocytes per c.cm., the polymorphonuclear cells numbering 75 per cent. Cultures from the blood on two occasions had shown the presence of a *Streptococcus longus*. The spleen was enlarged and tender; blood had been found in the urine on one occasion and there were pain and some râles and rhonchi in the right axilla. A loud systolic murmur was heard over the pulmonary area, and there was a distinct systolic thrill in the same position conducted towards the left clavicle. From the facts that cardiac symptoms had only been noted during the last two and a half years, and that there was no cyanosis or clubbing of the fingers, the conclusion was drawn that the narrowing of the entrance of the pulmonary artery was due to malignant endocarditis of the valves, and that the case was not one of malignant endocarditis developing on valves damaged by congenital heart disease.

Sir JAMES GALLOWAY referred to a case which he had seen of malignant endocarditis of the pulmonary valve in which, post mortem, an old infective periostitis of the tibia had been found; and to another case of pulmonary valve infection in a child with no discovered primary focus.

COMBINED SECTIONS OF ANÆSTHETICS AND LARYNGOLOGY.

ANÆSTHESIA IN THROAT AND NOSE OPERATIONS.

A COMBINED meeting of these sections of the Royal Society of Medicine was held on Feb. 6th, Dr. LLEWELLYN POWELL, the President of the Anæsthetics Section, being in the chair, when Dr. F. S. ROOD opened a discussion on Anæsthesia in Throat and Nose Operations. An abstract of the paper is given in the present issue of THE LANCET.

Discussion.

Mr. HERBERT TILLEY said he had only congratulations to offer to Dr. Rood. The prime consideration in the choice of anæsthetics was always the safety of the patient, the second being the convenience to the surgeon. He thought it was indisputable that ether was safer than chloroform, and safer than any mixture of which chloroform formed part. He spoke of some cases in which anæsthesia was induced for the purpose of some trivial operation in a healthy subject, and death occurred before the operation was even commenced. If the substance was chloroform one never knew when such an accident might occur. Some, while agreeing that ether was the safer anæsthetic, considered there was more bleeding under it. If ether were given in the way Dr. Rood had just described there was a little more oozing during the operation, but it occurred while the surgeon was on the spot to stop it; the surgeon should not allow a patient off the table until all bleeding, except capillary oozing, had ceased. With

chloroform there was little bleeding at the operation, but it might come on later when the surgeon was not within call.

Dr. D. W. HILL contended that Dr. Rood's method of administration was not correctly described as the "open ether method." Moreover, a means which required eight minutes for induction was not suitable for a busy out-patient department where many adenoid and tonsil cases had to be attended to. He spoke of the rapid and safe anæsthesia produced by ethyl chloride for these cases; he had seen only one case of critical difficulty under it.

Dr. G. A. H. BARTON said he had been agreeably surprised to find how well patients did under Dr. Rood's method of giving ether for the enucleation or the dissection of tonsils. By using a little ethyl chloride at the commencement to stimulate the breathing, and abbreviate the period of resentment felt by some patients, and following on with ether, he got the requisite degree of anæsthesia quicker than the eight minutes mentioned by Dr. Rood. For endo-laryngeal surgery it was difficult to administer the anæsthetic through the air-passages. Failing a sufficiently deep narcosis in these cases he inclined to the use of rectal anæsthesia.

Sir STCLAIR THOMSON said anæsthesia for operations on the nose, in which blood could be prevented from descending into the air-passages by post-nasal sponges, differed little from other operations. The real anxiety occurred in operations on the pharynx. In the three fatalities he had had, neither the operator, his technique, nor that of the anæsthetist seemed to account for the death. He described the cases. In all, an independent opinion declared status lymphaticus to have been present. Ether was mostly given in America, but one distinguished New York operator had gone back to chloroform, and Dr. Chevalier Jackson carried out his endoscopic operations without any anæsthetic whatever. Sir StClair Thomson had seen a foreign body in the bronchus removed by him from a boy, aged 10, without any anæsthetic.

Dr. J. F. W. SILK discussed the question of the posture; the dependent position of the head, thrown well back, with a pillow under the shoulders, he thought was not in all ways good. Sir StClair Thomson's method of sitting the patient quite upright seemed to have many advantages; the blood flowed out of the nose and mouth, and had no tendency to go into the air-passages. Those who objected to ethyl chloride objected to the bag, not to the anæsthetic; when the bag was used the fatalities from this anæsthetic had been considerable. The induction time of ether could be reduced by adding about 3 per cent. of chloroform; and the consumption of ether was also considerably less. He showed a Kuhn's intubation tube, which rendered induction easy for throat operations.

Mr. W. STUART-LOW referred to the importance of the preparation of the patient, and emphasised especially the need of having a warm room for him. Very few deaths occurred under anæsthetics in India, and that was probably due to the warm climate ensuring operation patients against chill. He advocated operations in the morning, while the patient was fresh, and said there should be absolute silence in the operating theatre, if only that the anæsthetist could listen attentively to the respirations. He had great faith in chloroform, and he had not had a fatality in a young person for 30 years.

Dr. P. WATSON-WILLIAMS said he would have liked to have heard discussed the advisability of giving morphine or scopolamine and morphine in conjunction with the other anæsthetics which were mentioned. And very little had been said about the blocking off of nerves by the injection of branches of the fifth, which had been carried out at Bristol with considerable success. He considered ether the best anæsthetic for operations on the respiratory tract, and referred to a case in which, after chloroform had been given, there was almost a fatal end. He did not think ether increased the liability to hæmorrhage, nor, if given slowly by the drop-bottle method and not pushed, did it result in much bronchial secretion. Hooper, of Boston, showed that during ether anæsthesia the adductors went first and the abductors last. During forced respiration expiration was slow, owing to medullary impulses, and if there was paralysis of the adductors there was a lessening of the influence of those pulse-slowing factors from medullary impulses. That seemed to be one of the reasons why the cardiac action was less inhibited during ether anæsthesia than during that of chloroform. Operations on the upper respiratory tract meant a pronounced influence on the fifth nerve, and there was likely, therefore, to be more cardiac inhibition than in operations on any other part of the body. He and his Bristol colleagues regarded ether as the ideal anæsthetic for operations on the upper respiratory tract.

Sir WILLIAM MILLIGAN said that, having been trained in Scotland, he had had a leaning towards chloroform during the whole of his surgical career, and he had had very little reason to regret it. No operation should be considered as a trivial one; each one, however slight, should be regarded as important. He agreed with Mr. Stuart-Low that operations, except those which were absolutely urgent, should be done in the morning when the patient was in his best condition. In such a discussion as this each participant should frankly give his own experience. He had a quite open mind as to the particular anæsthetic which should be used; he practically never interfered with the anæsthetist; the important need was for anæsthetist and operator to understand each other's idiosyncrasies. He was pleased to hear Dr. Silk's remark about Kuhn's intubation tube; he had heard it derided among experts, but he had used it on all possible occasions for the last ten years, even when operating on the nasal septum. But when gauze was taken out of the mouth the blood clot must be removed, or it might be sucked into the trachea. Adrenalin was a very dangerous drug to inject into the body when a general anæsthetic was being used. When ether was used for his cases he always insisted on a preliminary injection of morphia and atropine; under those conditions he had never been seriously troubled with hæmorrhage. He had never yet had, nor seen, a death under an anæsthetic.

Dr. H. E. G. BOYLE said ether should not be regarded as the only anæsthetic for nose and throat operations. For two years he had been employing a combination which had three variations. Patients were given a hypodermic injection beforehand, and the anæsthesia was produced by nitrous oxide in conjunction with either ether, C.E. mixture, or, in some cases, chloroform—the latter in cases in which the surgeon was using the diathermic cautery. He had used the method for 590 cases, and those he had instructed added 155 administrations. The hypodermic injection varied in quality and quantity according to the requirements of the particular case. Deep anæsthesia was maintained by the endo-buccal or the endo-pharyngeal method, and needed but little of the drug. The induction by this method was pleasant to the patient, and there was no struggling or undesirable sequelæ.

Mr. HAROLD BARWELL considered that ether, given by modern methods, preceded by atropine injection, was, on the whole, the best anæsthetic for nose and throat operations, especially when obstruction existed. In post-nasal resections he thought the post-nasal plug constituted an embarrassment to the surgeon, and it was unnecessary if the required ischæmia were obtained beforehand by injecting, 15 minutes before the operation, 1 in 10,000 or 1 in 15,000 adrenalin submucously. For such conditions as a suppurating maxillary antrum he preferred the patient to be lying on his side; he had never seen a case of pneumonia after anæsthesia when that posture was adopted.

Dr. A. BROWN KELLY said that for prolonged operations he left the choice of the anæsthetic to the anæsthetist, who usually employed chloroform. For brief operations he strongly preferred bromide of ethyl, which he had used 25 years, in many thousands of cases.

Dr. Z. MENNELL preferred to commence with gas and oxygen and then pass on to ether. That was quite safe so long as no chloroform was added, though it was very tempting to make that addition.

Dr. CECIL HUGHES referred to narcosis of moderate degree, which, having been commenced with either ether or gas and ether, could be best maintained with chloroform. There seemed then to be less after-sickness.

Dr. DUNDAS GRANT agreed that chloride of ethyl was a good anæsthetic for adenoid and tonsil operations on children, though sometimes he had wished for its longer duration.

Dr. W. J. MCCARDIE (Birmingham) described a method of induction of anæsthesia for nose—especially septal—operations, introduced by Dr. Seymour Jones, of Birmingham. It was known as the gauze curtain mask. Ether is given and the mouth tube inserted; a towel is placed round the patient's head and brought well over the cheeks; the mouth area is well vaselined and the gauze curtain strapped over the lips. The anæsthetic is then dropped on to the gauze over the mouth. He had himself used it with great satisfaction in more than a hundred cases.

Mr. W. DOUGLAS HARMER hoped Dr. Boyle's method would be specially discussed on another occasion.

Dr. HUGH PHILLIPS spoke highly of Dr. Boyle's method. He referred to a recent fatal case under ether administration in a child. The post-mortem examination revealed a thymus weighing 2¾ oz.

Dr. F. E. SHIPWAY declared that he had found very little danger from chloroform in his own practice if breathing was not obstructed.

Dr. ROOD waived his right of reply.

MEDICAL SOCIETY OF LONDON.

THE CLINICAL DIAGNOSIS OF DIPHTHERIA.

A MEETING of this society was held on Feb. 9th, Mr. V. WARREN LOW, the President, being in the chair, when Dr. H. DRINKWATER read a paper on the Clinical Diagnosis of Diphtheria and other Diseases of the Throat. In his opinion the differential diagnosis of diphtheria, except from Vincent's angina, could be settled by the appearance of the throat alone. There was a naked-eye character which he thought was constant. In every case sent into the East Denbighshire Fever Hospital as diphtheria over a period of three years the naked-eye diagnosis had been checked by a bacteriological examination, and without exception the bacteriological examination had confirmed the naked-eye diagnosis and proved the correctness of his views. The term "diphtheria" was applied, he said, to those cases only in which the Klebs-Löffler or the Hoffmann's bacillus was present. For convenience he divided the fauces into three areas on each side of the mid-line: the tonsillar area, the uvular area, and the palatal area. In diphtheria there might be five or six patches but never more than one patch in any one area. He had never met with a single exception to this rule, from which, if established, it followed that if in a given case two or more distinct deposits were seen in one tonsillar area the disease was not diphtheria, and the services of a bacteriologist were not required except for confirmation of the naked-eye diagnosis. It was of the utmost importance that the *whole* tonsillar area should be seen, for he had several times found two or more patches on a tonsil directly after having been told that there was only one. When two or more patches were present on one tonsil or in one tonsillar area the disease was generally follicular tonsillitis or influenza. If in a given case of membranous deposit on the fauces the patch was raised above the level of the mucous membrane, had sharply defined edges, and was single in each affected area, there could be no doubt that the disease was either diphtheria or Vincent's angina.

The features of diphtheria as manifested in the fauces in the early stage were a raised membranous deposit with sharply defined edges; the colour might be glistening white, bluish, yellow, or spotted with black or red; it rarely had the "wet wash-leather" appearance described in text-books; there was only one patch in any one area. These appearances were characteristic of the disease in the period of growth; after resolution had begun and the membrane was being cast off a number of isolated islands might be seen in the tonsillar area, but the diagnosis should have been made before this stage was reached. In many cases it was impossible to differentiate between Vincent's angina and diphtheria, as the distribution of the patches in both diseases was precisely similar. Occasionally a case of Vincent's angina could be recognised owing to certain peculiarities, the most characteristic of which was a sharply defined penetrating ulcer generally in the middle of the patch and running vertically. Sometimes, though rarely, the deposit did not go beyond the margin of the ulcer. Another peculiar feature was the marked thinning of the lower part of the patch, so that the inferior limit was ill defined. If either of these features were present the condition was recognised as Vincent's angina, however closely it might simulate diphtheria in other respects. Later on there was sometimes seen considerable erosion of the uvula, but this was long after the diagnosis should have been made.

Sometimes the deposit was softer and more creamy than that of diphtheria, but in other cases it was extremely dense and tenacious. Vincent's angina might be said to mimic diphtheria, just as hysteria and syphilis mimicked other morbid conditions.

In follicular tonsillitis there were marked swelling and congestion of the tonsils, and pus or muco-pus could be seen oozing out of several follicles. The single patch was never seen. In influenza also the patches were multiple in the tonsillar area and often without any swelling of the tonsils.

Discussion.

Sir JOHN BROADBENT said that the illustrations depicted very accurately the appearance of the throat in diphtheria, Vincent's angina, and follicular tonsillitis. He agreed that the membrane in diphtheria was ashy grey or whitish in colour and not like wash-leather. There was little difficulty in diagnosis in such definite cases as were portrayed, but there were many others in which the appearance was less characteristic or only suspicious, where bacteriological examination alone could supply the diagnosis. The same was true of cases seen first in a later stage. Some cases of scarlet fever with ulceration of the throat presented great difficulty, for they might be almost exactly like diphtheria, and the two were occasionally combined. In these cases cultivation from the throat was important. Mild cases might go undiagnosed and become carriers if there was no bacteriological diagnosis. He raised some doubts as to the specificity of the influenzal angina, and asked whether influenza had been proved to be the cause.

Dr. F. PARKES WEBER referred to the herpetic condition of the throat, which had been illustrated. Herpes in the mouth, in his opinion, was nearly always bilateral and of the catarrhal form, not herpes zoster. It was rare on the soft palate. He compared it with herpes met with on the nose and face, remote from the lips, in mild pneumonia. He had seen in 1918 a peculiar kind of superficial ulceration of the soft palate, having a greyish appearance and butterfly-like in shape, one patch being on the uvula and a wing on each side of the soft palate, to which the name "pterygoid" had been applied. A similar condition had been seen in newly-born children and had been ascribed to rough swabbing.

Dr. W. HILL said that there were occasional cases in which reliance must be placed on the bacteriological findings. Mistakes were likely to be made in diphtheria when the lesions were multiple while the throat was clearing up. In several instances he had met with combined lesions. It might be impossible to distinguish between Vincent's angina and diphtheria from the naked-eye appearances. The "coccal" patches depicted as influenzal might certainly occur in influenza, but they were an epiphenomenon, and might also occur apart from that disease. In difficult cases the illustrations would not help.

Dr. MONTAGUE SMITH narrated a case of what appeared to be typical follicular tonsillitis from which Klebs-Löffler bacillus had been recovered.

Dr. DRINKWATER, in reply, said that he had not suggested that bacteriological examination was unnecessary; it had been done in every case. If the

appearances which he had demonstrated were better known by the general practitioner, who saw the cases in their early stage, there would be far fewer inexcusable mistakes in diagnosis, nor would diagnosis be delayed for the time necessary to receive a report of bacteriological examination.

SOME NEW METHODS OF ILLUSTRATION.

Dr. T. B. HYSLOP read a paper on Some New Methods of Illustration, with pictures from an epidiascope. After brief reference to wood-cutting, typo-etching, lithography, photographic, and allied processes of illustration, he drew attention to "ortho-printing," a method by which pigments were conveyed direct to natural objects and the printed impressions taken from the objects themselves. Ortho-printing could be used for rapid and correct illustration of natural objects, such as ferns, grasses, leaves, flowers, sea-weeds, feathers, fabrics, cloths, laces, surfaces of metals, &c., in art for designs, wallpaper, stencilling, Gesso, woodwork, wood staining, metal work, pyrography, book covers, objects of art on wood, glass, china, and textile fabrics. The process was so simple and the results were so accurate that it would be of use in schools, colleges, polytechnics, &c., either for students to make their own illustrations or for the preparation of slides for lantern projection. Brief reference was then made to the adaptation of the Sherringham daylight reflector for correcting colour effects in artificial light, and to the further elaboration of ortho-printing for lithographic duplication.

CARDIFF MEDICAL SOCIETY.—At a meeting of this society held on Jan. 20th Dr. Alfred Howell showed a case for diagnosis. The patient, a married woman aged 45, the mother of four healthy children, had always suffered from epistaxis, severe and frequent in childhood, less so in later years; last attack two months ago. Severe hæmatemesis from gastric ulcer when 13 years of age. For last five years a moderate jaundice, no history of colicky pains or rigors. Had not lost weight and had been able to do her housework throughout. No sign nor history of syphilis. A moderate deafness of many years' standing. Urine contained bile. Fæces light in colour. Liver much enlarged to level of anterior superior spine. The edge, well defined and regular, the surface granular, but no large nodules to be felt. The spleen enlarged to the level of the anterior superior spine. Red blood count 4½ millions. Hæmoglobin 80 per cent.; white corpuscles 5200 in normal proportions. Wassermann reaction positive; other organs normal. The diagnosis lay between visceral syphilis, Hanot's hypertrophic cirrhosis of liver, and splenic anæmia (Banti's disease). In spite of the positive Wassermann reaction, the regularity of edge and surface of the liver, and the absence of history and signs of venereal disease made syphilis improbable in Dr. Howell's opinion. Between the diseases named after Hanot and Banti the difficulty in diagnosis was great, and upon it depended the question of operative interference. The age, the great enlargement of the spleen, the presence of bile in the urine, and the leucopenia were in favour of splenic anæmia.—During the discussion which followed Dr. Lyne Blight took the view that the case was one of visceral syphilis, and Dr. Ivor Davies that it was Hanot's cirrhosis.—Dr. Ivor Davies showed a case of Pseudo-hypertrophic Muscular Paralysis. The patient was a boy of 9, first seen at 5 years of age, when the characteristic physical signs were fully present, and there was a history of the peculiar attitude and gait dating from 2 years of age, when he commenced to walk. Two of the mother's brothers were similarly affected, and died at the age of 13 and 15 years respectively. Dr. Davies referred to five similar cases seen by him with a definite history of the disability dating from infancy, and expressed the opinion that this experience supports the view that the pathological changes are antenatal in incidence, and become apparent clinically at a much earlier age than is commonly supposed.

The jubilee of the Cardiff Medical Society was celebrated on Feb. 11th by a meeting of the society and a dinner in the evening. It is interesting to note that Colonel A. W. Sheen, the President of the society, is the son of Dr. Alfred Sheen, who was the first secretary when the society started in 1870. An interesting address was given by Dr. T. D. Lister, who dealt with Some Aspects of the Tuberculosis Problem. An abstract of this address is given in the present issue of THE LANCET. The dinner, like the meeting, was well attended, among the guests being the Lord Mayor of Cardiff, Mr. G. F. Forsdike. In the speeches references were made to the future development of the Welsh National Medical School as an integral part of the University of Wales and of the life of the Principality.

NORWICH MEDICO-CHIRURGICAL SOCIETY. — A meeting of this society was held at the Norfolk and Norwich Hospital on Feb. 3rd. A proposal to amalgamate the society with the Norfolk branch of the British Medical Association had been brought up at a previous meeting and since considered by the committee, who now reported that they did not consider the amalgamation advisable at present.—Mr. G. Maxted showed two cases of Primary Optic Atrophy in women. One of these he considered to be due to a tumour of the pituitary body.—In discussing the cases Dr. A. J. Cleveland said that the American surgeon, Cushing, advocated removal of pituitary tumours by operation, which was, in his opinion, quite an easy procedure.—Mr. W. E. Wyllys (Yarmouth) related a case of a Dislocated Cataractous Lens which he had removed by linear extraction.—Dr. H. J. Starling spoke on auricular Fibrillation, and showed three cases illustrative of the condition. He referred to Mackenzie's and Lewis's researches, which had demonstrated the existence of auricular fibrillation as a clinical entity. The cases exhibited showed very well the chief important diagnostic points of auricular fibrillation—viz., a pulse which remained irregular at varying rates, whether fast or slow, and an indistinct muffled diastolic murmur which replaced the typical pre-systolic murmur of mitral stenosis.—Dr. Starling also showed two cases of Subacute Infective Endocarditis.—Dr. E. B. Hinde showed a case of Tuberculous Shoulder and a case of Menierè's Disease.—Mr. C. Noon commented on a case of Actinomycotic Infection.—The following specimens were exhibited:—A Lacerated Kidney and a Ruptured Kidney, both injured whilst playing football.—Mr. E. W. Everett: Uterus and Tubes removed for Gonococcal Infection.—Mr. Noon: Arteries from the Leg of a case of Senile Gangrene.—Mr. A. J. Blaxland: Uterus showing Carcinoma of One Lip of a Hypertrophied Lacerated Cervix; also a Tuberculous Kidney removed by the Abdominal Route.—Sir H. A. Ballance: Radiogram of a Right Kidney with two very large calculi. He also showed a Peptic Ulcer of the Jejunum; and a Duodenal Ulcer, causing fatal hæmorrhage, with a peptic ulcer of the jejunum in addition.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Feb. 6th. The cases and specimens shown were not numerous, but were of interest; whilst some shed light on yet obscure points in pathology.—Dr. C. W. Vining showed temperature charts from a soldier who, in 1916, whilst in Mesopotamia, had suffered from sandfly fever. About two and half years later the patient developed a remittent fever. Careful and repeated physical examination revealed no signs. Blood examinations, cultures from bowel contents, blood, and nasopharynx were equally bare of result. The patient was kept in bed under varied treatment, but with no effect on the temperature, and he lost weight. He was allowed to get up; the temperature immediately began to wane and in a few days became normal. He gained weight. On being put back to bed the temperature again rose, with loss of weight. Alternations of bed and "out of bed" always showed the same phenomena. Finally he was kept up, and now appears to have regained his usual health.—Mr. E. R. Flint showed a case of unusual interest. The patient, a man, had, when 24 hours old, been operated on by Mr. H. Littlewood for imperforate anus. Five months later he developed abdominal distension with marked constipation, which was relieved by drugs and enemata. Ten years later he was troubled with abdominal discomfort and constipation. In May, 1918, there was enormous distension of the belly, again relieved by enemata, but in the August following a Paul's tube had to be tied into the colon. There was never any obstruction, and all the time the anus admitted two fingers. Later the tube came out and the bowel was closed. The condition, however, recurred in November, and on opening the abdomen the sigmoid was found to be enormously distended: this portion of the gut was resected, anastomosis done, and the belly closed. The dilatation was purely local and measured 22 inches in circumference. The man is now well and working. The case was one of Hirschsprung's disease—obviously a congenital abnormality and not dependent on obstruction, and associated only with the imperforate anus.—Mr. H. Collinson, Dr. L. A. Rowden, Mr. J. F. Dobson, Dr. G. W. Watson, Dr. W. MacAdam, and Mr. W. Thompson also showed cases.—Professor T. Wardrop Griffith gave a paper on the Electrocardiograph and its Teachings. He covered the now familiar ground from Kolliker to Einthoven in an inimitable way. Numerous electrocardiograms, some historic, showed the scientific and practical value of the instrument. Professor Griffith indicated that in disturbances of rhythm the electrocardiograph was a necessity. It was the only method of localising a block in the right or left branches of the bundle of His, or determining right or left ventricular excess. Further, by its use Mackenzie's nodal rhythm had been shown to be auricular fibrillations. The electrocardiograph was the most certain method of diagnosing transposition of the heart.

DERBY MEDICAL SOCIETY.—A meeting of this society was held on Feb. 10th at the New County Offices, St. Mary's Gate. Sir Richard Luce presided.—Dr. S. Barwise, county medical officer, read a paper entitled "The Problem of Tuberculosis," in which he emphasised the view that tuberculous infection enters most frequently by the tonsils or intestines and that the risk from dried sputum is remote.—Dr. W. C. Fowler, medical superintendent of the County Sanatorium, read a paper on Artificial Pneumothorax Treatment, illustrated by some excellent radiographs.—An interesting discussion took place afterwards, in which the President, Dr. C. A. Greaves, Dr. A. E. Brindley, Dr. H. G. Dawson, Dr. Helen Greene, Dr. J. G. Nicholson, Dr. E. Watt, Dr. G. S. Sims, and Dr. H. Barber took part.—After the meeting members inspected the County Laboratories where some interesting slides and specimens were exhibited.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.—At a meeting of this society, held on Feb. 4th, Dr. Edwin Bramwell read a paper on Encephalitis Lethargica. After briefly outlining the circumstances which led to the condition being recognised as a definite clinical entity, and mentioning the literature of chief importance, Dr. Bramwell described the main features of diagnostic interest. The symptoms vary very much in different types, and also the mode of onset. In many cases the disease sets in gradually, some days or even one or two weeks elapsing before it is fully developed. There was usually a rise of temperature, associated with headache and often vomiting. The patient became increasingly drowsy, and there was frequently diplopia, paresis of accommodation, marked constipation, difficulty in passing urine, and neurotic pains. Extreme asthenia was common, but excitement might also be pronounced. The asthenic type was the most important, but cases might develop suddenly with apoplectiform symptoms; meningitis might also be simulated, or neuralgic pains in the head and limbs be the chief manifestations. The appearance of a typical case was very striking. The patient lay quietly on his back for hours at a time, the face was flushed, the eyes half closed; he was disorientated, appeared to have no interest in anything, and made no complaint. The lips moved, but the face was characteristically immobile and featureless; responses were very slow. There was often marked tremor, fumbling with the bedclothes, jerking movements, delirium, and sleeplessness. The somnolence might deepen into coma. Dysphagia occasionally occurred. A diffuse erythema had been noted. There was general muscular weakness, the third nerve was liable to paralysis, and the facial muscles were often weak from involvement of the seventh. The cerebro-spinal fluid was clear; sugar was present in the urine in two cases observed. The various types of the disease were then outlined in detail and the difficulties of diagnosis discussed. In rarer cases tumour of the brain, paralysis agitans, and disseminated sclerosis might be simulated. The sexes were affected equally, and the disease might occur at any age; it seemed to be commoner in the colder months. The mortality varied considerably in different series of figures. In cases which recovered progress was usually slow, some degree of stupor persisting for weeks or months. There was no specific treatment, but strychnine and quinine both seemed of value in special cases.—Dr. James Miller discussed the morbid anatomy, histology, and bacteriology of the disease, and showed numerous lantern slides and microscopic preparations by way of illustration. The morbid anatomy was not very definite, but there were striking changes in the mesencephalon, including œdema, chromatolysis, and perivascular infiltration. The bacteriology was also discussed, as well as experimental transmission of the disease.

ROYAL MEDICO-CHIRURGICAL SOCIETY OF GLASGOW.—At a meeting of this society, held on Feb. 6th, Mr. A. E. Maylard, the President, in the chair, Dr. W. F. Somerville described "The Bergonie chair, an apparatus for producing a painless, alternating, interrupted electrical current," and demonstrated its application in treatment. By this painless method of faradisation the muscular system was said to be improved and developed, the nutrition of bones and joints improved; the heart's action assisted and breathlessness and œdema relieved; the nervous system quieted and sleep often improved; obesity lessened, constipation relieved, and general nutrition accelerated.—Dr. W. S. Syme, in a communication on "Malignant Disease of the Larynx," pointed out that in this country this disease was much commoner in men than in women, whereas malignant disease of the lower pharynx was commoner in women. Intrinsic disease—i.e., affecting the cords, anterior fornix, subglottis and false cords—might remain as a local condition for a long time, and hence could frequently be treated by thyrotomy and removal of the growth and surrounding tissue. But in extrinsic disease, affecting other portions of the larynx, glandular infection was very common, and the patient was often seen by the surgeon too late for operation. Hence the importance of early diagnosis in cases of persistent hoarseness. Dr. Syme showed a patient whose larynx he had removed two years ago for extrinsic disease. There had been no recurrence and the patient had developed a quite intelligible pharyngeal voice. He reported also three cases of removal of a vocal cord, by thyrotomy, one 2½ years and the other 3½ years ago, without recurrence, and a third more recent case.—Dr. Adam Patrick described a case of Multiple Oriental Sores (Leishmaniasis) infected in Mesopotamia early in 1919 and treated by intravenous injections of antimony. The injections, 11 in all, were given twice weekly, beginning with a dose of 0·04 g. of tartar emetic and increasing to 0·12 g. The seven ulcers present, on hands, legs, &c., had healed satisfactorily. Mr. Archibald Young described, and showed specimen removed by operation from, a case of Ulceration of the Ileum, Cæcum, and Ascending Colon, with Intussusception of the Appendix. The patient, a woman aged 34, had for two years suffered from progressive loss of weight and strength, and from persistent severe pain in the right iliac fossa. The bowels had for long been constipated, but latterly, when moved, they tended to be loose. On examination under an anæsthetic a tumour about the size of a chestnut was made out in the region of the first part of the ascending colon, and suspected to be malignant. Laparotomy was performed, and as extensive glandular enlargement was found, the last four inches of ileum, the cæcum, and ascending colon were excised. The mucous membrane of this portion of bowel showed extensive ulceration, typically tuberculous both to the naked eye and on microscopic examination. Ulceration was specially marked in the cæcum around the partly intussuscepted appendix. Convalescence was uneventful and the patient left hospital a month later greatly improved in health. Mr. Young referred to three other cases of intussusception of the appendix, the first two of which he had reported to the society in 1911: (1) A child, aged 4½, operated on for a suspected partial and recurrent obstruction of the bowel; (2) a woman, aged 24, operated on because of highly acute symptoms suggesting acute appendicitis; (3) a woman, aged 20, operated on in 1917 on account of appendicitis of more chronic type with recurrent attacks extending over several months. The specimen from this case also was shown to the meeting. In all four cases it was probable that the exciting cause of the intussusception of the appendix was the local irritation exciting excessive peristalsis of the organ.

RONTGEN SOCIETY.—A joint meeting of the Institution of Electrical Engineers, the Electro-therapeutic Section of the Royal Society of Medicine, and the Rontgen Society, will be held in the Royal Society of Medicine, 1, Wimpole-street, London, W., on Thursday, Feb. 26th, from 5 to 6.45 P.M., and 8.15 to 10 P.M. A discussion on "Electrical Apparatus in Relation to X Rays." will be opened by Dr. Reginald Morton (Efficiency of High Tension Transformers); Major C. E. S. Phillips (The Problems of Fluctuating and Alternating Currents); and Mr. R. S. Wright, M.I.E.E. (High Tension Transformers). Those wishing to take part in the discussion are invited to apply for advance copies of the papers ten days before the date of the meeting. There will be an exhibition of apparatus in the adjacent rooms. The "Silvanus Thompson Memorial" Lecture will be delivered on March 2nd by Professor W. H. Bragg, C.B.E., F.R.S., on "Analysis by X Rays." Professor Bragg has been Quain Professor of Physics in the University of London since 1915, when he also received the Nobel prize for work on X rays and crystals. Members of scientific societies will be admitted to the lecture on signing the visitors' book. The honorary secretaries of the Rontgen Society are: Dr. Robert Knox, 38, Harley-street, London, W.1., and Dr. R. W. A. Salmond, O.B.E., 51, Welbeck-street, London, W.1., to whom all communications should be addressed.

Lieut.-Col. G. Horne, A.M.S., Australia, has been appointed an Esquire of the Order of St. John of Jerusalem in England.

PRINCE OF WALES HOSPITAL, CARDIFF.—Definite steps have now been taken to organise this hospital for civilian service, and a fund sufficient to ensure its future is being accumulated rapidly. The representatives of the army and navy on the council are being replaced by others interested in the industrial life of Wales. The last of the Service patients will be leaving shortly, and the institution will be opened to help maimed civilians. Already statistics have been collected which show that in Wales maimed civilians are equal in number to those crippled in the war. The hospital, which owes its existence to the enthusiasm of Sir J. Lynn-Thomas, was early to originate after-care for surgical cases; its transference to civilian service opens up a vista of surgical possibilities for the future.

Reviews and Notices of Books.

REMINISCENCES OF THREE CAMPAIGNS.

By Sir ALEXANDER OGSTON, K.C.V.O. London: Hodder and Stoughton. 1919. Pp. 335. 16s.

THIS book deals with the author's experiences in the Egyptian and South African wars, and on the Serbian and Italian fronts in the recent war; its claim of special interest to medical men rests on the criticisms of the Army Medical Department. Sir Alexander Ogston believes that medical matters will never be placed on a satisfactory footing in the army until the Medical Service is removed from the control of the War Office. This idea is evidently the motive of the book. In Part I. he deals with the Egyptian War and says: "It was not difficult to detect that the best men, physically and otherwise, were in the other branches of the army, while it was the residuum only which were attracted into the ranks of the Army Medical Department." In the interval between the Egyptian War and the South African War the author visited Germany, France, and Russia, and became acquainted with their army medical services, and then concluded that this country was seriously falling behind the other European powers in its medical and surgical provision for war. So that he appears as a frankly prejudiced critic of later events.

Dealing with the South African War in Part II., he says that such impediments as were placed in his way came from the Army Medical Department. He repeats the criticisms of a colonel who commented on the alleged jealousy of the medical department, and on the impediments, described as unreasonable, but placed in the way of the sick and wounded, who thus could not receive the comforts that private benevolence was eager to place at their disposal. This officer also remarked on the scandal, if it occurred, that in bad cases the nursing by trained women was refused by the medical authorities. When Sir Alexander Ogston visited the Third Stationary Hospital there were no antitoxin serums, no X ray apparatus, and the instruments and apparatus were ancient in type. On a visit to the Red Cross depôt in Parliament House at Cape Town he found plenty of useful stores accumulated, but a want of proper organisation for their distribution, so that in his opinion they might almost as well have been left in England, for all the use they were in Africa. He states that the work of the Red Cross was rendered almost of no avail by the unspoken but clearly shown jealousy and even hostility of the Army Medical Department, and that his advocacy of reform in the medical services resulted in the adoption of a hostile attitude towards him by some officers in the medical services.

The author mentions the assertion of Block, the Russian writer on modern warfare, that calamity is likely to ensue if the aid of the civilian population is not early organised and regularly continued on behalf of the sick and wounded in warfare. This aid must supplement the medical organisation within the army, as was fully proved by the South African War, and he considers that there was abundant evidence that the heads of the Army Medical Department in Africa were out of sympathy with progressive ideas and had no proper appreciation of the value of the civilian consultants. He quotes from Mr. Burdett-Coutts's famous description of the terrible conditions following the occupation of Bloemfontein.

Coming to the late Great War, the author's experiences in Serbia have led him to be critical of some of the British contingents. He formed, however, a high opinion of the Serbian hospitals proper and of their medical military officers, and has a warm appreciation of the Italian medical services. The only defect in the Italian hospitals that he mentions is the absence of young and competent women nurses. In all his reminiscences the author indicts the methods of the Royal Army Medical Corps, and while removal of the censorship allows frank criticism, it will also make frank rejoinder possible.

JOHNS HOPKINS HOSPITAL REPORTS.

Vol. XVIII. 1919. Baltimore: The Johns Hopkins Press. With 124 figures. Pp. 452.

THE present volume, which is divided into two parts, contains a number of papers dealing with original contributions from various members of the staff of this famous hospital. In variety of subjects selected and excellence of illustration this report maintains the reputation gained by its predecessors. The ductless glands receive considerable attention, particularly the pancreas, which forms the subject of three separate communications. E. W. Goodpasture and G. Clark demonstrate the presence of a toxic substance in the fresh pancreas which is associated with the B. nucleo-protein. Injection of this protein, or protein combined substance, produces symptoms comparable with those met with in acute hæmorrhagic pancreatitis. An interesting case of diabetes mellitus associated with hyaline degeneration of the islands of Langerhans is described by M. C. Winternitz. The morbid anatomical changes in the pancreas in diabetes mellitus are not always convincing, and consequently such cases as that described are of more than passing interest. In a third paper contributed by A. D. Clark two changes are found to occur in the utilisation of sugar by the living heart tissue, viz.: a condensation of part of the sugar to a non-reducing form and a destruction of the remaining part. The condensed sugar can be again recovered by hydrolysis, but the fate of the destroyed portion was not ascertained.

D. W. Wilson and his collaborators contribute a paper on the question of parathyroid tetany. The tetany which follows removal of the parathyroids can be relieved by acids and also calcium salts. The effects of administration of acids in producing relief from tetany is explained by the occurrence of an "alkalosis" which the body attempts to neutralise by the production of acids in the muscular movements associated with tetany, and a condition of "acidosis" may occur after acute or chronic tetany. Winternitz in a paper on "Some Observations on the Effect of Feeding Glands of Internal Secretion to Chicks," describes the effects of dried anterior lobe of the pituitary body on the growth and development of the reproductive glands in both sexes. In some cases the effects on development and egg-laying capacity were very striking. A number of papers deal with cellular metabolism and histological changes in the cell, and have a bearing on the question of malignant tumours. The relation of old age to cell overgrowth and the occurrence of malignant tumours is described by Goodpasture and G. B. Wislocki. M. T. Burrows and C. A. Neymann have studied the metabolism of cells in vitro and the influence of α-amino acids on embryonic chicken cells. Their observations tend to show that cells are unable to live in any great concentration of amino acids.

A number of papers will interest the clinician, and many of them illustrate the thorough and painstaking way in which the cases have been worked out. Bayne-Jones contributes a paper on Carcinoma of the Pleura with Hypertrophic Osteo-arthropathy, with a description of a case. E. D. Plass, in addition to giving an extensive bibliography, comprising 204 papers dealing with various congenital anomalies of the œsophagus, describes a case of congenital atresia of the œsophagus, with tracheo-œsophageal fistula and fused kidney. A paper on Gaucher's Disease, by J. H. M. Knox and his collaborators is of interest, as the two cases described were infants, whereas the literature on this disease is mainly confined to its occurrence in adults. As illustrating the path of spread of generalised tuberculosis, a paper by Winternitz, in which a case is described of generalised miliary tuberculosis which occurred as the result of extension of a tuberculous pericarditis into the heart cavity.

The number of papers in the present volume exceeds that of previous years and the pathologist, histologist, morbid anatomist, and clinician will each find papers of special interest to him in this collected work. Such reports illustrate the advantages possessed by a

hospital and university medical school, not only in the coöperation of their work, but the numbers of workers available to investigate the valuable clinical material.

PHYSIOLOGY AND NATIONAL NEEDS.

A Course of Public Lectures delivered at King's College. Edited by W. D. HALLIBURTON, M.D., LL.D., F.R.C.P., F.R.S., Professor of Physiology, King's College, London. London: Constable and Co., Ltd. 1919. Pp. 162. 8*s*. 6*d*. net.

SOME seventy years ago Sir James Paget dwelt, in a public address, on the importance of the study of physiology as a branch of education for all classes, believing that even a moderate acquaintance with its principles, acquired early in life, would benefit a man both in body and mind. He also pointed out that none of our untaught faculties, neither senses nor instincts, were sufficient guides to good or guards from evil, even in the ordinary conditions of civilised life, and that this was particularly so with regard to health. His statement that while endeavouring to improve present means of life men took no pains to prevent or remedy the future evil cannot be wholly applied to the work which was carried on in our laboratories during the war, but now that the immediate menace is passed it behoves us to see that apathy does not supplant the enthusiasm born of necessity. While it is admitted by thinkers generally, and by the more thoughtful of our legislators, that education of the people is a great national asset, the idea conveyed by the word education does not, save among a very small minority, include those sciences which directly bear upon the health of the people; yet apart from the utility which a broad knowledge of physiology and hygiene, for example, may have on the individual, there is the even greater effect which such a knowledge on the part of the people will have on the nation as a whole.

We are controlled by public opinion, and efforts to apply the discoveries of medical science are wasted unless backed by that opinion. Public knowledge is the remedy, and such lectures as those delivered in the spring of last year under the auspices of the Imperial Studies Committee of the University of London, are good examples. These lectures were briefly reported in THE LANCET at the time they were delivered, and, like the preceding course, "Animal Life and Human Progress,"[1] illustrate the needs and uses of science during the stress of war with its implied application in times of reconstruction and peace. In the introductory lecture, Physiology and the Food Problem, Professor Halliburton, who organised the course, reminds the reader that medical progress during the last four years has probably been more rapid than in the previous 40, and reviews the work done by the Medical Research Committee, the Food Committee of the Royal Society, and by other bodies in standardising and guarding the food supplies of the nation. To this lecture has been added an appendix summarising the main principles of dieting. The two following lectures, by Professor F. Gowland Hopkins and Professor A. Harden respectively, demonstrate the effect of vitamines and the pathological results of their absence in diets; and in the fourth lecture Professor Noël Paton shows the importance which physiology plays in the study of disease, illustrating his theme by showing how this science came to our aid during the war. Emphasising the importance of physiological study, he says: "Without a training in medicine the physiologist can approach the study of disease with some prospect of success; without a knowledge of physiology the physician is merely groping in the dark." Professor A. Dendy gives an interesting account of what was done during the war to prevent the destruction of grain by weevils; and the last lecture, which was delivered by Professor M. S. Pembrey, is a plea for improving the health of the nation by muscular exercises in the form of games, sport, or work in the open air.

[1] THE LANCET, June 28th, 1919, p. 1120.

1. DISEASES OF THE SKIN.

By RICHARD L. SUTTON, M.D., Professor of Diseases of the Skin at Kansas School of Medicine. Third edition. London: Henry Kimpton. 1919. With 910 illustrations and 9 coloured plates. Pp. 1084. 42*s*. net.

2. SKIN DISEASES.

By FREDERICK GARDINER, M.D., Lecturer in Skin Diseases at the University of Edinburgh. Edinburgh: E. and S. Livingstone. 1919. With 46 illustrations. Pp. 160. 6*s*.

1. Dr. Sutton has brought the third edition of this handsome volume carefully up to date, as reference to the various maladies discovered or more widely recognised during the war will prove to the modern student. Thus there is a brief but succinct description of the effects upon the skin of tetryl, of mustard gas, and of other chemical irritants which have been widely used in the preparation of munitions or in active warfare. We note also reference to the use of remedies discovered and proven to be of value during the war, such as dichloramine-T, and the paraffin-wax treatment of burns. Curiously, Dr. Sutton does not mention that the employment of this latter agent was first popularised by the results obtained in the treatment of war burns by the "ambrine" of Dr. Barthe de Sandfort in Paris. Full and complete monographs on the less common maladies are not to be found in this volume, but though the descriptions of rare diseases such as erythema figuratum perstans and necrobacillosis, are very brief, they contain the essential and differentiating features. The references to literature throughout will aid the student seeking further knowledge of uncommon conditions in dermatology. As befits these times, when venereal diseases have been proven to be the frequently unsuspected cause of chronic deep-seated maladies, syphilis is treated at considerable length. The paragraphs on treatment throughout the book are, on the whole, of practical value, and in many cases original. On the other hand, certain details are somewhat perfunctory. Complete X ray details are given for the X ray treatment of ringworm, but in many cases the reference to X ray technique is too vague to be of any use. The information regarding the treatment of urticaria and psoriasis by the injection of a foreign protein is well up to date and very clearly described. The illustrations are of uneven value, though some are excellent.

2. Dr. Gardiner's little volume justifies its claim to be the outcome of experience in lecturing, and is a practical introductory handbook for the student or practitioner. As far as possible, the diseases are described in order of occurrence in practice, though this rule is not adhered to when syphilis and tuberculous conditions are described after such rare maladies as dermatitis herpetiformis and pityriasis rubra pilaris. In view of the importance of adequate instruction in the methods of treatment of syphilis it is disappointing to find so brief a description and such lack of detail as to precise dosage and length of time necessary to continue under treatment. The illustrations, as a whole, are not up to the high standard found in modern text-books of dermatology.

SYMPTOMS OF VISCERAL DISEASE.

A Study of the Vegetative Nervous System in its Relationship to Clinical Medicine. By F. M. POTTENGER. London: Henry Kimpton. 1919. Pp. 328. 21*s*.

TAKING as his subject-matter the symptoms of visceral disease, the author has attempted in this monograph to interpret these symptoms in terms of visceral neurology, and thus to bring out more clearly the relationship between physiology and clinical medicine. The bulk of the monograph is devoted to a study of the innervation of the viscera and visceral reflexes, whose range the author considers extremely wide. He believes, for example, that an inflammatory condition of the lung may reflexly set up impulses passing out not only along the efferent fibres of the vagus, but even along

the entire cranio-sacral autonomic system, including the pelvic nerve. In the last section of the book the author deals with the purely physiological aspect of the autonomic nervous system. Although it contains some useful information, this monograph lacks the critical and discriminating spirit which is so important for the successful correlation of clinical observation with physiological evidence; and we do not think the book is likely to prove helpful to the practising physician.

RECTOSCOPIE-SIGMOÏDOSCOPIE.

Par le Dr. R. BENSAUDE, Médecin de l'Hôpital Saint-Antoine. Paris: Masson et Cie. 1919. With 15 plates. Pp. 48. 28 fr.

THIS monograph on the uses of the proctoscope and sigmoidoscope contains an account of the apparatus and the necessary technique, with brief remarks on indications, contra-indications, and the value of the procedure for diagnosis. The book is not overweighted with text, and the remarks in the three pages devoted to the therapeutic applications of the proctoscope are, indeed, too brief to be of much value. More than half the bulk of the book is taken up by 15 pages of excellent illustrations, most of them in colours. The normal appearances are illustrated as well as the pathological, and this "Atlas of Rectoscopy" should be found very useful as a guide for those who are beginning an acquaintanceship with the rectum.

OTO-RHINO-LARYNGOLOGY.

For the Student and Practitioner. By Dr. GEORGES LAURENS. Authorised English translation of the second revised French edition by H. CLAYTON FOX, F.R.C.S. Irel. With a Foreword contributed by J. DUNDAS GRANT, M.A., M.D., F.R.C.S. Bristol: John Wright and Sons. 1919. With 592 illustrations. Pp. 339. 17*s*. 6*d*. net.

CLINICAL teaching in oto-rhino-laryngology in France appears to be in much the same state as in this country, otherwise neither this book nor its translation into English would have been needed. It is an attempt, and should be a very successful one, to interest the practitioner in these subjects, to persuade him not to treat disease of these regions without examining the parts affected, and to show him how to make the necessary examinations. The book is on somewhat original lines; each section on treatment begins with a paragraph on "what to avoid," and is followed by "what to do." Elaborate illustrations are absent, but it abounds in excellent line drawings and diagrams, some of them, as the author says, "almost puerile in their simplicity, which have been inserted in order to visualise and fix the mental picture." The writing is concise and, as perhaps must be in a work of this kind, exceedingly dogmatic. It is also very uneven; thus, while much space is devoted to the detection of deafness simulated by malingerers, a subject usually outside the duty of the general practitioner, no mention whatever is made of the testing of ordinary cases of deafness with the tuning-fork to distinguish middle-ear from labyrinthine deafness, which is much more often required and is quite easy to do. A great deal of attention is given to balneological treatment, which is not greatly in vogue for these diseases in this country. There is a relatively very long description of respiratory and gymnastic exercises.

As would be expected in a book reflecting French practice, general anæsthesia is not advised in a large number of operations in which it is regularly used in England, this being due to the fact that the science and art of anæsthetics is in a less progressive state on the continent than among the English-speaking peoples. Of "tonsillotomy for practitioners," it is said, "never employ the guillotine"; morcellement is the method advised, and Dr. Laurens appears to believe that the entire tonsil is easily removed by this method, and says; "Anæsthesia—in the young child: let him be firmly held by an assistant; in adults and reasonable children above the age of 8 or 10 years, local anæsthesia." It will be seen that the English family doctor will not be wise to follow all the advice given in this book implicitly. Even more open to criticism is the statement on malignant disease of the tonsil that "treatment = 0, especially no surgery." In short, the work being dogmatic, statements can be found which should be qualified and taken as a whole, when the practitioner will find much to stimulate his interest in a group of subjects of great importance in general practice, and the specialist, too, may get help from the pithy descriptions and clever diagrams to enliven his clinical teaching. The translator's work has been well done; it would have been more useful to the average doctor if the prescriptions had been given in imperial as well as metric measures and, especially, if certain drug names, such as guipsine and goudron, unfamiliar here, had been explained.

DISEASES OF THE THROAT, NOSE, AND EAR.

For Practitioners and Students. By W. G. PORTER, M.B., B.Sc., F.R.C.S. Edin. Third edition, fully revised under the editorship of A. LOGAN TURNER, M.D. Edin., F.R.C.S. Edin. Bristol: John Wright and Sons. 1919. With a photogravure portrait of Major Porter and 79 illustrations, 44 of which are in colours. Pp. 300. 12*s*. 6*d*.

WE welcome the third edition of this excellent little manual. The first edition was produced in 1912, the second edition was brought out by Dr. P. McBride in 1916, during the absence on active service of the author, who was killed in action on June 8th, 1917; and now a third edition has been prepared as a pious contribution to his memory by his old friends and former colleagues in Edinburgh. Dr. Logan Turner has revised the chapters on Diseases of the Larynx and the Nasal Accessory Sinuses, Dr. J. S. Fraser has amplified those on Suppuration of the Labyrinth, Nerve Deafness, Chronic Catarrhal Deafness, and Otosclerosis, while a useful description of vestibular tests has been contributed by Dr. J. Milne Dickie. The alterations are few, and we have here a first-rate text-book of its size and scope, well written, well printed, and well illustrated.

THE MICROSCOPIC ANATOMY OF THE TEETH.

By J. HOWARD MUMMERY, D.Sc. (Penn.), M.R.C.S. London: Oxford University Press. With 243 illustrations. Pp. 382. 25*s*.

DURING recent years Mr. Howard Mummery has contributed several valuable papers to the Philosophical Transactions of the Royal Society, and no one is better fitted to write a text-book on the subject, for he has taken the trouble to investigate every branch of it, confirming or rejecting statements which have been generally accepted; and while he gives a clear account of his own views, he is chivalrous in describing the views of others.

In the introduction he gives a concise account of the functions of teeth and modern views on heredity. The first chapter deals with the development of the teeth, and contains a lucid description of the theories which have been formulated to account for the evolution of the human molar teeth. The two following chapters are devoted to the enamel, and the structure and development of this tissue in the animal kingdom is graphically described. Attention is directed to the view of Smreker that "the majority of the prisms in human enamel are not rounded or polygonal in transverse section, but have an arched form owing to the prisms being longitudinally grooved and fitted into one another." The author supports this view, and gives several drawings from teased preparations made from the enamel of the elephant, so showing in a conclusive manner that not only do the prisms interlock, but that they are connected by bridges, traversing the interprismatic substance.

The chapter on the dental pulp is very significant, because for the first time in any text-book the distribution of the nerves of the pulp is clearly set out. The medullated nerves which enter the pulp cavity through the apical foramina lose their medullary sheath and neurilemma in time, and give rise to a

brush- or fan-shaped expansion of delicate fibres, and form a plexus beneath the odontoblast region. At the lower margin of this layer the delicate nerve fibres of the plexus form synaptic connexions with nerve end-cells which are present in a distinct row among the odontoblast cells. These nerve end-cells are provided with a distal process or axon, which is unbranched and passes direct to the dentine, where it enters the dentinal tube in company with the dentinal fibril. The other processes or "dendrons," given off from the peripheral portion of the nerve end-cells, pass to the odontoblast cells to form a delicate network around them forming synaptic communications with the dendrons of neighbouring nerve end-cells. This mode of distribution of the nerves of the pulp appears to be peculiar to the teeth, as such a mode of termination of sensory fibres in "end-cells" is not met with in other organs.

There are chapters on the dentine cement, Nasmyth's membrane, the periodontal membrane, the attachment of teeth, horny teeth, and the tooth follicle and its connexions. This last chapter contains original observations, for Mr. Mummery has shown that the sheath of Hertwig is not a continuation of the enamel organ, but is a prolongation of other epithelial cells in the follicle which lie to its outer side, these cells moulding and determining the dentine of the root. We congratulate the author on his excellent work.

PRACTICAL BIOLOGY.

The Cambridge Note Book for Practical Biology (Zoology). Sixth edition. Edited by J. STANLEY GARDINER, M.A., F.R.S., and L. A. BORRODAILE, M.A. London: Henry Frowde and Hodder and Stoughton. 1919. Pp. 76. 5*s*.

ON the principle that a student must make a personal examination of each of the animals he is required to know, this note book is intended to help in the examination of a few type animals, which include the frog, amœba, vorticella, hydra, earthworm, crayfish, cockroach, amphioxus, dogfish, rabbit, and fresh-water mussel. The skull of the dog and the heart of the rabbit are included in the typical subjects. The only illustration is a bold and useful one, showing the general anatomy of the frog. Of histology there is little, and it is very elementary. Brief instructions are given at the top of each page (quarto) and the remainder is left blank for the corresponding drawing by the student. No doubt it has proved useful to the Cambridge student, as is shown by the fact that this is the sixth edition.

THE MARGARET BOOK.

By ALFRED CLARK, F.R.C.S., N.Z.M.C. London: John Lane. 1919. Pp. 189. 5*s*.

THE love story of Margaret and Peter, written partly in verse and partly in prose. The story is quite light and serves merely to string together the verses, which are musical and pretty, if they reach no great heights. The introduction of Margaret's illegitimate sister in the last chapter of the book is an inartistic lapse which we fail to appreciate.

A MEDLEY OF VERSE.

By F. BARBER WELLS, M.B. London: W. H. and L. Collingridge. 1919. Pp. 106. 2*s*. 6*d*.

A COLLECTION of verses, grave and gay, illustrating the author's love of the sea and the countryside. The volume includes a selection of poems from Dr. Barber Wells's "Roll of the Drum," which, now out of print, received a favourable reception on its first appearance, and is still in request.

WHEELS, 1919.

Fourth Cycle. Edited by EDITH SITWELL. Oxford: B. H. Blackwell. Pp. 104. 6*s*.

THIS little book needs neither preface nor apology, for its pictorial covers inform us (1) that the authors are among the moderns, and (2) that they rarely hit the bull's-eye. So criticism is disarmed in advance. As a matter of fact, the authors scarcely do themselves justice. They are not so very perverse, and much of their work is quite first-rate and undeniably beautiful. Sherard Vines, especially in The Soldier's Last Love, and Wilfred Owen, whose untimely death we sincerely deplore, have done excellent things. Mr. Aldous Huxley, whose cleverness is beyond doubt, in The Betrothal of Priapus reveals a distressing dyspepsia, which is at least one of the conventional attributes of the poet. In one way or another the remaining contributors have achieved success. Where they fail it is often just from excess of zeal, and our homely advice to them is "Don't press; it's the swing that does it."

We are sorry about the appendix.

JOURNALS.

Parasitology. Edited by GEORGE H. F. NUTTALL, F.R.S. Vol. XII., No. 1. January, 1920. C. F. Clay, Cambridge University Press. 15*s*. net; yearly subscription £2 5*s*.—The opening article on Coloration in Ticks, II., by G. H. F. Nuttall, contains two very beautiful coloured plates representing several species of ticks figured for the first time from the living specimens: these include *Dermacentor venustus*, the carrier of Rocky Mountain fever. It is shown in this article that the colour of ornate ticks may change after a prolonged period of parasitic life.—Professor Nuttall, writing on Regeneration of the Mouth-parts and Legs in Ticks, gives a detailed record of his experiments, and comes to the conclusion that the mouth-parts and legs of immature stages of ticks may regenerate more or less completely when amputated shortly after the ticks have abandoned the host in a fully engorged condition. The power of regeneration in ticks is very important in connexion with their maintenance in nature, where they are frequently injured, and this power is greater in *Ixodidæ* than in *Argas persicus*.—An article by Charles L. Boulenger contains a list of nine species of nematodes living in the donkey and the description of two new species, *Strongylus asini* and *Cylicostomum adersi*.—Philip Manson-Bahr and N. Hamilton Fairley contribute most interesting observations on Bilharziasis among the Egyptian Expeditionary Force, made in 1916–1918, when large numbers of troops were stationed in heavily infected districts. As to the life-history of Schistosomidæ, this paper contains a striking confirmation of the work of Japanese authors, of Leiper and other investigators; it corroborates, also, the results of the recent Bilharziasis Mission in Egypt. There are two forms of bilharziasis in Egypt: (1) the rectal form, produced by *Sch. mansoni*, and (2) the urinary form, produced by *Sch. hæmatobium*. The two parasites differ in life-history and structural development. In *Sch. hæmatobium* the terminal-spined eggs are deposited in excreta (urine and fæces); on reaching the water the ciliate miracidia hatch, and in a period not exceeding 36 hours have to find the intermediary host, a snail of the genus *Bullinus*; the miracidium penetrates into the snail and becomes transformed into an elongated sporocyst, which by budding produces the cercaria. The latter are ejected again in water, where they move actively, and within 24 hours have to penetrate into their final host, usually man, who is invaded either through the skin (during bathing or paddling in the infected water) or through the upper part of the alimentary tract (in drinking the infected water). The parasites finally make their way to the portal veins, where they become adult, male and female. In the case of *Sch. mansoni*, the miracidia hatching from the lateral-spined eggs, penetrate another species of snail of the genus *Planorbis*. The authors produced both forms of bilharziasis in several monkeys via the skin or upper alimentary tract, and noticed a marked pruritus, and, in a few cases, definite skin rashes following the penetration of cercaria. Itching, which did not persist more than 48 hours, or even a rash was observed on boys collecting snails in heavily infected waters. They confirmed

experimentally: (1) that *Planorbis* is never infected by the miracidia from terminal-spined eggs (of *Sch. hæmatobium*), nor *Bullinus* with the miracidia from lateral-spined eggs (of *Sch. mansoni*); (2) that cercaria from *Bullinus* transform only into *Sch. hæmatobium*, while those from *Planorbis* only develop in *Sch. mansoni*. Methods of prophylaxis recommended are: (1) destruction of ova in excreta before they reach water; (2) destruction of the intermediary hosts (snails, *Bullinus contortus*, *B. dybowski*, *B. innesi*, and *Planorbis boissyi*); (3) purification of contaminated water-supplies. All these recommendations are very difficult to realise in practice. They strongly advise a microscopical examination of fæces and urine of all persons returning from an infected country (Egypt) to an uninfected one (Australia or India), because the only means of preventing the introduction of this disease into other countries is to confine the carriers of schistosome ova to a limited area, where their excreta would be incapable of reaching any water-supply containing a suitable intermediary host. Finally, the paper contains: (1) a good morphological description of various stages of both parasites, *Sch. hæmatobium* and *Sch. mansoni*; (2) an account of the distribution of molluscan hosts and of their seasonal infectivity; and (3) an investigation of the Sweet-water canal, which was the source of infection amongst Australian and Imperial troops.—An article on Human Intestinal Protozoal and Helminthic Infections observed in Malta, by Thomas Bentham, represents the results of two years' examination of the stools of patients stationed in Malta. 7325 examinations were made of 3370 patients belonging to the four following groups: (1) Troops sent from Salonika Hospital to Malta; (2) garrison troops; (3) troops on their way out from England or France; and (4) prisoners of war. These observations illustrate the endemic nature of amœbiasis in Malta.—D. Keilin writes on a New Saccharomycete *Monosporella unicuspidata* gen.n. nom., n.sp., parasitic in the body cavity of a Dipterous larva (*Dasyhelea obscura*, Winnertz), and gives a description of a new saccharomycete belonging to the genus, the only other species of which was described by Metchnikoff (1884) in connexion with his earlier observations on phagocytosis.—The last paper of this number is on the Occurrence of a Supplementary Chromatic Body in *Maupasella nova* Cépède (Ciliata Astoma), an Intestinal Parasite of an Earthworm (*Allolobophora caliginosa* Savigny), by D. Keilin. The chromatic body referred to is probably derived from the condensation of the extranuclear chromatin.

The British Journal of Children's Diseases. Vol. XVI., October to December, 1919. Edited by J. D. ROLLESTON, M.D.—In an article on Poliomyelitis and Polioencephalitis Dr. Edmund Cautley describes a group of seven cases of affections of the nervous system which were admitted to the Belgrave Hospital for Children within less than a month from different parishes in the neighbourhood. The cases are of interest to the practitioner as regards diagnosis and prognosis, and to the pathologist and epidemiologist as regards the close connexion between poliomyelitis and encephalitis, and the possibility of an endemic outbreak of these diseases. The cases described occurred in children aged from 13 months to 7 years, and were examples of acute poliomyelitis (two cases), polioencephalitis (three cases, one of which was of the lethargic type), encephalitis (one case), and basal meningitis (one case). Dr. Cautley points out that the difficulties in the accurate diagnosis of such cases are very great, even in hospital, where they are generally admitted after some days' illness, and are under careful examination afterwards, while in private practice the difficulties may be insuperable. He regards the reflexes taken in conjunction with the other symptoms as the chief factors of value in differential diagnosis. Examination of the cerebro-spinal fluid may give assistance, but sometimes the fluid cannot be obtained on lumbar puncture, and occasionally the degree of illness hardly warrants the exploration.—Dr. F. Parkes Weber and Mr. T. H. Gunewardene relate the Sequel of the Case of Lipodystrophia Progressiva which they showed at the Section for the Study of Disease in Children of the Royal Society of Medicine on Jan. 24th, 1919, a microscopical report by Dr. H. M. Turnbull being appended. The patient, a girl, aged 13, had died from pyæmia following mastoid disease. The necropsy showed that the body was much wasted. Fat was practically absent on naked-eye examination from the subcutaneous tissue of the upper part of the body. There was no evidence of tuberculosis anywhere. The thyroid gland was rather large, and on naked-eye and microscopic examination was found to be very rich in colloid material. The thymus was represented by a scanty remnant. The brain did not appear in any way diseased, and microscopical examination of one ovary, the pituitary gland, and both suprarenals showed nothing special.—In a paper on School Dental Clinics and their Management, Mr. C. E. Wallis discusses the question of school dental inspection, including the ages at which it should begin, the place where it should be carried out, the proportion of anæsthetic sessions, the choice of the dental surgeon, anæsthetist, and nursing staff, and the appointment of a supervising dentist.—Under the heading of Society Intelligence readers will be glad to see a résumé of the proceedings of the Société de Pédiatrie de Paris, whose meetings have been interrupted for four and a half years. The abstracts from current literature are devoted to diseases of the respiratory system, tuberculosis, and surgery.

Brain. A Journal of Neurology. Vol. XLII., Part 3. London: Macmillan and Co.—This number of *Brain* consists of two papers—one by Dr. Carmalt Jones on War Neurasthenia, Acute and Chronic, and the other by Dr. Kovy of Groningen on Hyperglycæmia in Mental Disorders. The former paper is a personal record of war experiences in the care and treatment of cases of neurasthenia, and the outcome of these experiences is a forcible plea for the intelligent and sympathetic but yet firm treatment of the conditions. War neurasthenia, Dr. Carmalt Jones is inclined to believe, in its various phases—fatigue, loss of control, and visceral disturbance—is to be ascribed to exhaustion of, or intoxication with, the products of the ductless glands, and especially to over-stimulation or exhaustion of the adrenals. The hyperglycæmia and occasional glycosuria in these cases would thus be explained. He has valuable suggestions to offer for the organisation of the methods of treatment. The second paper by Dr. Kovy discusses the significance of sugar in the blood both as a cause of mental disorder and a result. He has made many observations, and concludes that hyperglycæmia may occur with any emotional state in mental disorders, and that emotions, especially of a depressing character, may cause a temporary hyperglycæmia, and even glycosuria, in normal persons. Glycosuria has been also found to occur in animals as a result of fear or anger, and Dr. Kovy concludes that in all the degenerative psychoses in which is found unexplainable variability of mood, the deeper cause may be sought for in the animal world. It will be seen from this brief summary that valuable and suggestive points occur in both these papers, each of which is in some degree complementary to the other.

Discovery. London: John Murray. Price 6*d*.—We announced in our issue of Nov. 1st, 1919, that as a result of a conference called early in that year by the Presidents of the Royal Society, the British Academy, and other important bodies, it was decided to publish, not for profit, a popular monthly journal, in order to keep the public informed of the progress of knowledge in all branches. The first number (January) contains an interesting series of contributions from writers eminent in their subjects. Professor R. S. Conway sends an article (first instalment) on the Secret of Philæ; the Master of Balliol, Mr. A. L. Smith, one on Discovery and Education; and of medical interest is an essay by Professor T. H. Pear on the Modern Study of Dreams. Science in its application to recent warfare is interestingly presented in such articles as Smoke Screens at Sea, by Dr. Slater Price, and Sound-Ranging in War Time, by A. S. Russell. The various contributions are a

striking example of the art of writing to the level of the man of general rather than special training or education, while remaining scientifically sound. The writers do not employ the language of their specialism, but that simpler tongue which, to quote the Editor, "we plain men do understand—namely, English." An important feature of the journal is that references to literature on the subjects dealt with are given when possible at the foot of each article, thus enabling a reader, whose interest has been attracted, to pursue the matter further.

Military Surgeon. December, 1919.—Although the usefulness of physical therapy has long been recognised by the medical profession, the experiences of the war have emphasised its merits from the preventive, curative, and remedial standpoints. Physical education, as preventive physical therapy, demonstrated its value during the war. Surgeon Commander K. Digby Bell, R.N., in an address delivered before the Royal Society of Medicine, and published in THE LANCET of Jan. 31st, urged the country's need of a more comprehensive and a better organised system of physical education, and, moreover, insisted that it was up to the medical profession to see that it got it. But perhaps the fullest account of the results and potentialities of physical therapy is given in a paper on the Importance of Physical Therapy in Military and Civil Practice, read by Commander W. Seaman Bainbridge, Medical Corps, U.S.N.R.F., at the annual meeting of the Association of Military Surgeons of the United States held in St. Louis, Oct. 13th and 14th, and published in the issue of the *Military Surgeon* under notice. Bainbridge goes further and considers physical therapy of importance for physical conditions and disabilities as well as for many functional disorders. He points out that industrial warfare is responsible for a large annual toll of injured persons, and suggests that both civilian and military hospitals in time of peace shall have departments of physical therapy fully equipped, so that they may be utilised, not only for the treatment of the injured, but to secure a maximum of physical efficiency among the general population, and may be made readily adaptable in the event of war. However, it is obvious that the equipment of a hospital for physical therapy is by no means all that is needed for the proper working of a new department. There must be a sufficient supply of skilled exponents of physical therapy, or such treatment will be worse than useless. Captain E. A. Bott, C.A.M.C., of the Military School, Hart House, Toronto, made certain proposals designed to overcome this difficulty in a paper read before the International Conference on the Rehabilitation of the Disabled, held in New York, March 18th–21st, 1919. He drew attention to the fact that if physical therapy was to be conducted with success lay workers must be trained in passive and active movements and in various forms of applied exercises. There is complete agreement among medical men as to the beneficial effects of some forms of physical therapy, and all appear to be of one mind respecting the need for skilled exponents thereof, working under the supervision of specially qualified medical men. The suggestions made by Commander Bainbridge are thus timely and worthy of consideration.

Fifth and Sixth Annual Reports of the Ophthalmic Section, 1917 and 1918. By the Director of Ophthalmic Hospitals. Cairo: Government Press. 1919.—Thirteen permanent ophthalmic hospitals have been built in Egypt since 1906. These are now at work and are aided by four travelling hospitals. There were 81,529 new patients in 1917 and over 1,000,000 attendances, the number being slightly greater in 1918. 13·9 per cent. of all the patients examined were blind in one or both eyes. The cause of blindness in most cases was not trachoma but acute conjunctivitis. Of the operations performed, fully one half were for the relief of trichiasis and entropion. The reports include Dr. MacCallan's tables showing the relation between the incidence of gonococcal and other forms of conjunctivitis and the temperature curve.

New Inventions.

IMPROVED "606" NEEDLE.

THE needle illustrated below is made of nickel, and consequently takes a high polish and keeps a good point. It has a stout bore, which has many advantages in routine work, shortening the time fluids require to pass through it and obviating all chance of clotting of blood during the taking of Wassermann specimens, as blood flows easily through it. The needles are also more easily cleaned inside. The head or "butt" is made of the shape shown in the sketch; on two opposing faces are series of corrugations for improving the grip, and on another face is a small arrow to indicate the plane of the bevel point (the bevel is always kept on this plane when resharpening,

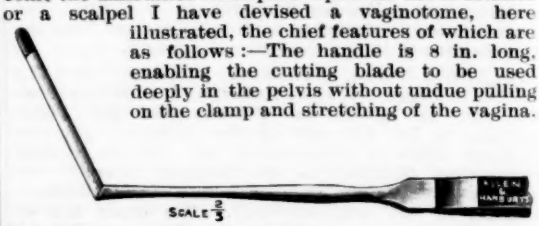
so that the needle is always held in the same way when giving injections). These needles are so arranged that the corrugations fall naturally under the first finger of the right hand, while the arrow face of the head, and consequently the bevel point, are directly "upwards," as this seems the best position for insertion into the vein. The rounded butt makes it a very simple matter to slip a small rubber tube over the end for taking Wassermann specimens, difficult when the square-headed needles are used, and necessitating much thicker tubing. The calibre of this butt is standard and fits the Record syringe and Harrison's tap.

The needle is made for me by the Medical Supply Association, Limited, Holly-street, Sheffield.

Sheffield. E. F. SKINNER, M.A., M.B., M.R.C.P.

THE VAGINOTOME.

ONE of the more difficult steps in Wertheim's radical hysterectomy for carcinoma of the cervix is the final division of the vagina, after the application of the Berkeley-Bonney T-shaped vaginal clamp, preparatory to the removal of the uterus from the body. To overcome the difficulties consequent upon the use of scissors or a scalpel I have devised a vaginotome, here illustrated, the chief features of which are as follows:—The handle is 8 in. long, enabling the cutting blade to be used deeply in the pelvis without undue pulling on the clamp and stretching of the vagina.



The knife is set at an obtuse angle on the handle, allowing the operator to cut horizontally under the clamp whilst holding the handle vertical, and also slightly tilted. Thus the tendency while cutting across the vagina will be to cut close to the clamp, instead of more deeply, to a lower level of the vagina, where the bladder may still be adherent. The instrument also carries a blunt bistoury end to safeguard the rectum from being wounded behind. The use of this knife gives a perfectly clean section through the vagina, without the ragged appearance that often follows the use of curved scissors or ordinary knife, and renders this step in the operation easy, for it is unnecessary to put heavy traction on the clamp when making the section.

The vaginotome is made for me by Messrs. Allen and Hanburys, Ltd., 48, Wigmore-street, London, W.

Harley-street, W. ALECK W. BOURNE, M.B., F.R.C.S.

WESTON-SUPER-MARE HOSPITAL.—The war memorial of Weston-super-Mare is to include a new women's ward, containing 7 beds, with accommodation for nurses. The cost of the scheme is £3000.

THE LANCET.

LONDON: SATURDAY, FEBRUARY 21, 1920.

Tuberculosis and Residence.

WHILE our present-day housewife has been charged with a lack of proficiency in housecraft, when compared with her continental sisters, there is no doubt that in this country as in other countries the family is the economic and economical unit of society. To break up the family, and to shelter one member of it in an institution, apart from dire necessity, is to incur an entirely disproportionate expense for an individual, and this can hardly be justified to tax- or rate-payers in the times immediately ahead of us. There are two essential elements in the economical running of a household. One is the mutual adjustment of tastes, celebrated in a familiar nursery rhyme, so that one member takes what the other leaves; the other is a deeply-rooted instinct to keep down expenses within the limits of the family budget. Both of these safeguards are soon lost in any form of institutional life, with far-reaching economical consequences. In view of these considerations, the indefinite extension of sanatorium and training-colony treatment for tuberculosis, however ideally desirable, must be regarded as very difficult at the present time. Fortunately, a larger view of tuberculosis is beginning to prevail, and it is getting to be recognised that institutional treatment has its chief purpose in education, and should be limited to a brief period of tuition in the manner of life suitable to the tuberculous individual.

With one proviso. That the individual, having learned what manner of life he should lead, returns to conditions where he can carry it out. Sufficient food, hygienic environment, and the absence of economic strain, these are the three essential factors which must be on the side of the individual who is putting up a life-long struggle against tuberculosis. And the greatest of these is the last. In the modern factory, as Mr. P. C. VARRIER-JONES, among others, has reminded us, if the pace of an operative is slackening, or if he is weak in his attendance, the whole shop is thrown into a state of confusion. The tuberculous worker is either a nuisance to his employer, or risks his health by an attempt to keep up to an impossible standard. But surely it is not beyond the reach of human endeavour to set up special conditions for workers who are incapable of rush against time, and to provide remunerative employment while doing away with the economic struggle—the rock on which so many consumptives are wrecked. Mr. VARRIER-JONES has recently idealised a tuberculosis colony as a community of consumptives in which hygienic and economic factors have been adjusted to suit the abnormal physical and mental state of its members. The tuberculous subject must work, and the first practical consideration is to make conditions under which he can work to the full extent of his powers. The recent special report on tuberculosis by Dr. JOHN ROBERTSON, medical officer of health for Birmingham, makes it clear that in Birmingham at least it is not the home environment which is chiefly at fault. The mortality-rate in the decade of highest working efficiency (ages 35 to 45) was 4·5 per 1000 for males and only 1·6 per 1000 for females, and yet, as Dr. ROBERTSON points out, women at these ages spend far more time in the dwelling house than do the men. In his address at Cardiff, reported in our present issue, Dr. T. D. LISTER heralds the dawning of the idea that we must try to provide such conditions of life and labour as would render the expensive sanatorium unnecessary. And at the moment the conditions of labour seem most in need of reform, a view that deserves all prominence, for it precludes the relegation of measures for the control of tuberculosis to that day when housing conditions shall be perfect. The intimate association between bad housing and the spread of tuberculosis is too often used as a cover for indefinite delay in preventive measures.

On p. 457 of our present issue Dr. F. STANLEY TINKER, tuberculosis officer for North-East Surrey, outlines a scheme for the post-sanatorium employment of the consumptive ex-soldier which meets some of the chief difficulties. The scheme includes both training and permanent employment. So long as they are undergoing training the men would be in receipt of a training allowance from the Ministry of Pensions, and the financial burden of the experiment would be thereby relieved. The municipal workshop, which Dr. TINKER suggests, is to serve the requirements of the discharged ex-Service men in a population of 75,000, and would provide 40 to 50 benches in two workshops, one for training and one for permanent employment. Assessment of hours of work is to be regulated by a medical officer, presumably the local tuberculosis officer, on a strictly individual basis, the man receiving the trade-union rate of wages for each hour of his work, irrespective of the actual amount turned out. The manager in control of the business side of the shops would see to the carrying out of the medical officer's instructions. Dr. TINKER makes large claims for his scheme, the most reasonable of which is that it will not work against any existing proposals, but rather be an adjunct to any of them. The municipal workshop certainly deserves consideration, and especially because it brings the human side of preventive medicine into contact with public affairs. The problem in respect of the tuberculous subject is seen to be the transformation of a weakly member of the community into one who can shoulder his burdens despite his drawbacks.

The Blockade and the Food-supply of Germany.

THE following tabular statement reveals the population of the former German territories in 1911 and 1919:—

Population in Thousands of Persons—1911 and 1919.

Age.	Population.		Increase or decrease.	
	On 1/12/1911 (calculated from Census of 1/12/1910).	On July, 1919 (preliminary estimate of Imp. Statist. Off.).	Absolute.	Per cent. of Col. 1.
	1	*2*	*3*	*4*
0-1	1663·2	838·5	−824·7	−49·6
1-2	1558·4	755·9	−802·5	−51·5
2-3	1589·1	845·9	−743·2	−46·8
3-4	1561·3	1093·7	−467·6	−29·9
4-5	1545·5	1424·8	−120·7	−7·8
0-5	7917·5	4958·8	−2958·7	−37·4
5-6	1490·1	1474·5	−15·6	−1·0
6-7	1501·6	1544·0	+42·4	+2·8
7-8	1448·4	1489·3	+40·9	+2·8
8-9	1503·2	1545·7	+42·5	+2·8
9-10	1452·4	1493·3	+40·9	+2·8
5-10	7395·7	7546·8	+151·1	+2·0
10-15... ...	6918·4	7268·7	+350·3	+5·1
15-19... ...	5080·1	5553·8	+473·7	+9·3
19 & over: Male ...	18362·1	17575·4	−786·7	−4·3
Female...	19318·4	21210·6	+1892·2	+9·8
Both ...	37680·5	38768·0	+1105·5	+2·9
Total population ...	64992·2	64114·1	−878·1	−1·4

Proportion of Each Age-Group per 1000.

0-1	25·6	13·1	−12·5	−48·8
1-2	24·0	11·8	−12·2	−50·8
2-3	24·5	13·2	−11·3	−46·1
3-4	24·0	17·0	−7·0	−29·2
4-5	23·8	22·2	−1·6	−6·7
0-5	121·9	77·3	−44·6	−36·6
5-6	22·9	23·0	+0·1	+0·4
6-7	23·1	24·1	+1·0	+4·3
7-8	22·3	23·2	+0·9	+4·0
8-9	23·1	24·1	+1·0	+4·3
9-10	22·4	23·3	+0·9	+4·0
5-10	113·8	117·7	+3·9	+3·4
10-15 ...	106·4	113·4	+7·0	+6·6
15-19 ...	78·2	86·6	+8·4	+10·7
19 & over: Male ...	282·5	274·1	−8·4	−3·0
Female...	292·2	330·9	+33·7	+11·3
Both ...	577·7	605·0	+25·3	+4·4
Total ...	1000	1000	—	—

The figures are based on the preliminary estimate of the German Imperial Statistical Office, and behind their terrible story lies this message: a five-year age-group of German population drops out, and by so much the German can be regarded as a less menace to the peace of Europe. The figures were communicated on Tuesday last by Professor E. H. STARLING to the Royal Statistical Society, in an address infused throughout with the scientific intention to say nothing save on first-class evidence, and to prophesy nothing that was not supported by that evidence. Taken in connexion with the rest of Professor STARLING'S paper, the figures show alike the preponderating part played by our naval blockade in deciding the final issue, and the influences that remain, to the German detriment, as the result of that blockade.

Commencing with an analysis of the figures showing the total amount of food available for human consumption in Germany during the year 1912–13, the conclusion was reached that before the war the Germans were more richly fed than the inhabitants of either England or France. Nor was the bulk of German imports, as far as they could be classified as food imports, ominously large; it amounted to 8 or 9 per cent. of all foodstuffs. But in those imports was an unduly large proportion of the proteins and fats necessary to make up a normally nutritious diet, and herein lay the cause of Germany's undoing. When the blockade began to take effect, about the autumn of 1916, the calorie value of the foodstuffs at the German disposal became insufficient, nor did they contain a due amount of tissue-building substance. The food directly or indirectly derived from importation accounted for 27 per cent. of the total protein of the diet. To some extent this fact was indicated in an authoritative pamphlet published in Germany at the end of 1914, under the editorship of Dr. PAUL ELTZBACHER, Rector of the Berlin High School. This pamphlet, which was abstracted in English in our columns shortly after its appearance,[1] achieved a wide circulation later in translation by Dr. RUSSELL WELLS, under the title "Germany's Food, Can it Last?" While its information did not fail to impress us with the foresight of the German Government in certain directions, there were many physiologists who were able to see that, if a naval blockade could be maintained, Germany must fall through starvation, though the time that such a wearing-down process would occupy might be vastly protracted by superior organisation, economy, and good weather. That none of these factors came to the assistance of the Germans was shown by Professor STARLING in unmistakable manner. German agriculture, starting from a position which had been given an unduly optimistic appearance by the figures of the German Imperial Statistical Office, and suffering under recurrences of unfavourable weather, by the third year in the war was powerless to meet the demands upon it. Chemical manures were wanting, as were concentrated feeding-stuffs for the cattle; farmyard manures lost their value; the production of meat, fat and milk went down; and, lastly, an unfair distribution of what food there was kept the rich man alive at the expense of the poor.

By the fourth year of the war Germany was a beaten country, despite the power of attack

[1] THE LANCET, Feb. 20th, 1915, p. 389.

and dourness of defence which, we remember only too well, still resided in the armies. Says Professor STARLING: "Three years on a diet insufficient as to quantity and quality, indigestible, tasteless, and monotonous, had a marked influence on the vitality and efficiency of the great bulk of the urban population, which finally resulted in that changed mentality which rendered impossible any further efforts of attack or even resistance." This is not to say that the blockade won the war, for the blockade would have been largely ineffective had not the Allied Armies contained and beaten back the German forces. But the moral is that when at last all the resources of the Allies were found in concentration against the Central Empires, hunger, the cruellest weapon, brought the end. The effects of the blockade remain, and medical readers of the tabular statement which we have quoted will recognise that those effects will be active for many years, as disease takes the toll which follows innutrition.

International Medicine.

THE League of Nations Council, which met in London on Saturday last, struck out a bold line in several directions, none of which is likely to have more far-reaching consequences than the appointment of a committee to draw up a scheme for an International Health Commission. How pressing is the need for such a Commission hardly requires emphasis. Many diseases hitherto snugly localised in far-away dominions and dependencies have been mobilised by the war, and are likely to remain mobile in view of the new freedom of communication by land and sea and air. Rabies in England and typhus in Paris have brought this to our knowledge. The task of the international commission which visited and reported on the typhus risk on the Russian frontiers last autumn was rendered largely nugatory by the lack of any central authority to carry out the recommendations. The International Health Commission, when it is set up, should find that its work has been facilitated by the General Council of the League of Red Cross Societies which assembles in Geneva on March 2nd. Pride of place has been there given to the department dealing with medical information and publication. There are other signs which show a tendency towards a pooling of health interests. The National Red Cross Society of Czecho-Slovakia has joined the League of Red Cross Societies. Dr. OCTAVE MONOD, of the Pasteur Institute in Paris, has accepted the appointment of assistant chief of the department of tuberculosis under the League, and his experience should be invaluable. Sweden is organising a mobile antityphus hospital of a hundred beds.

We commend this stirring of the waters to Dr. F. F. SIMPSON, of Pittsburgh, who visited London last week in connexion with a proposal to form a World Congress of Physicians and Surgeons, and who is now in Paris after paying a flying visit to Brussels. At the meeting of representatives of the various specialties in medicine and surgery called last Friday at the Royal Society of Medicine to meet him, Dr. SIMPSON urged the need, for the benefit of mankind, of forming an international medical council on which every country should be represented. The American view, which he was authorised to set forth, is that each international organisation should forthwith make such adjustments as would permit of a prompt resumption of international activities. He stated that France, Belgium, and Italy had expressed general approval of the scheme, and he proposed that Great Britain and the United States should join these countries in appointing two representatives each on a special investigation committee to meet in Paris next month. The Royal Society of Medicine, while expressing sympathy with Dr. SIMPSON'S objects, felt bound to admit that there were at present a number of specialties without any international organisation, and it was therefore resolved to meet again after obtaining the views of the constituent sections of the society. We can hardly doubt that the verdict will be in favour of using to the full the place of medicine as international reconciler.

Annotations.

"Ne quid nimis."

THE CONSULTATIVE COUNCIL ON GENERAL HEALTH QUESTIONS.

THIS Council, appointed under the Ministry of Health Act, held its first meeting last week. The Minister of Health, Dr. Addison, who was accompanied by Lord Astor, Parliamentary Secretary to the Ministry, presided, and asked the Council to put before him a statement of the main defects in existing provisions for safeguarding the health of the people, and to suggest remedies from the standpoint of persons who as members of the general public will be affected by the health services supervised by the Ministry. The members of the Council have been appointed with this special purpose in view. Women form a majority of the membership. Lady Rhondda will act as chairman and Mr. Arthur Greenwood as vice-chairman. The other members are as follows: Mrs. Aspinall (United Textile Factory Workers' Association), Councillor C. Aveling (Past-President of the National Chamber of Trade), Mrs. F. Harrison Bell and Miss Margaret McMillan (Labour Party), Mrs. Burke and Mrs. Hood (Women's Coöperative Guild), Mr. George Goodenough (Parliamentary Committee of the Coöperative Congress), Mrs. Ogilvie Gordon, D.Sc. (President of the National Council of Women of Great Britain and Ireland), Mr. W. L. Hichens (Chairman of Messrs. Cammell, Laird and Co., Ltd.), Mr. W. Littler (Civil Service Alliance), Mr. Samuel Lord, F.S.S. (National Association of Local Government Officers), Mrs. Mayo (a member of the Dorsetshire County Council), Mr. F. H. Norman (Professional Workers' Federation), Miss E. M. Phelp (National Association of Domestic Workers), Mrs. Pember Reeves, Lady Edmund Talbot, and Miss Gertrude M. Tuckwell.

A NEW TREATMENT OF COLLES'S FRACTURE.

IT might be thought that the last word had been said on the most common of all fractures, which has been discussed times out of number since it was first described a century ago by Abraham Colles. In the Boston *Medical and Surgical Journal* of Dec. 4th, 1919, Dr. F. J. Cotton, a leading American authority on fractures, gives a new pathology and treatment for this injury. He finds that the bad results often obtained are due to failure to recognise and deal with the backward tilting of the distal fragment. As long as this persists proper reduction of the ulna is impossible, and it is to ulnar luxation rather than to the fracture itself that he ascribes the resulting disability. When the wrist is broken the radius gives way, but the whole damage, according to Dr. Cotton, is best expressed as a rotation backward of the hand about the ulnar head as a fixed point, which tears the ulnar ligaments loose and also breaks the radius. The hand is displaced, with the radial fragment, upwards and backwards, to a varying degree, always with tilting backwards of the lower fragment. After long experience of the accepted manipulations to correct the displacement, it occurred to Dr. Cotton to reverse the mechanism of production. As the ulna is the fixed point about which the hand is displaced, he makes it the fixed point about which he reduces. As the hand is displaced in extension, he reduces it in flexion. As it is displaced in a rotation of supination about the ulnar head, he reduces it in pronation. The older methods of reduction aimed almost entirely at carrying forward of the lower fragment on the upper. For this they are good, and are still used by Dr. Cotton. The new method is, after correcting the obvious displacement of the radius, to carry the hand about the ulnar head as a fixed point into pronation and flexion. This is quite simple. With the hand a little extended, traction and a rocking movement are made so as to free the displaced radial fragment and the dislocated ulna. Then, with the thumb under the ulna, making it a fixed fulcrum, the hand is dragged down into flexion and pronation, traction being maintained at the same time. The finishing movement is a twist of the whole hand about the ulna. The whole may be done as one twisting sweep, rarely needing repetition. For retention the ordinary splints are often inefficient if a first-rate result is desired. Muscle tone holds the fragments against re-displacement in toto, but not against tilting backwards of the lower fragment, especially as there is often much crushed and missing bone at the back edge of the fracture, thus leaving a gap. Tilting can be prevented only by maintaining flexion; this is best done by plaster, preferably applied as strip splints of eight to ten layers of plaster-of-Paris bandage, one on the back from elbow to knuckles, one in front from upper forearm to palm. These are held with a few turns of plaster-of-Paris bandage. The same thing may be done less efficiently with splints provided with an exaggerated pad on the back of the hand and front of the forearm. While the wrist is in flexion the posterior ligaments prevent the radial fragment from tilting backwards, and so long as the ulna is held to the back of the flexed wrist the ligaments can heal to near their normal length. This is important, for their laxity means weakness and often permits subluxation of the ulna with each supination—a common factor in disability. Dr. Cotton finds that this slipping ulna is always undiagnosed. The flexion position need not be maintained more than a fortnight, but if plaster is used it is wise to slit it along one side and keep a careful watch, as the position impedes the circulation. Indeed, the chance of this trouble has prevented Dr. Cotton from publishing the method, long as he has used it. After the flexed position is abandoned, straight splints with the pads described above are used for a third week—never longer except for special reasons. Then a supporting strap of adhesive plaster with a pad in front of the ulna (the ligaments are the last to heal) is worn and changed every three to five days until the hand is strong. Dr. Cotton finds that the hand recovers function more quickly after flexed fixation than after straight splints, though he does not know why.

THE RONTGEN SOCIETY AND RADIOGRAPHIC RESEARCH.

THE exhibition organised by the Röntgen Society, and held at the rooms of the Royal Photographic Society last month (THE LANCET, Jan. 31st), was largely due to the initiative and organising ability of Dr. George Rodman, a past president of the Rontgen Society. At this exhibition an opportunity was given to become acquainted with the enormous strides made during 25 years in every branch of radiographic work. It was, however, an exhibition of finished prints; and only the instructed imagination could picture the corresponding development in the whole technique of radiography, in the intermediate stages, including the introduction of machinery for the production of high-tension current, the improvements in the X ray tube, the skill and ingenuity of the physicist and of the technical expert. We should like to see a further exhibition showing side by side the first apparatus used in radiography in 1896 and an up-to-date model of the present day. The Rontgen Society possesses a collection of X ray tubes illustrating all the steps in the development of this all-important factor in radiography, but so far no effort has been made to provide a display of these improvements in apparatus. The past 25 years have been productive, and it is plausible to suggest that the greatest discoveries have already been made, and that future work will be rather in the nature of improvements in existing apparatus and methods. But since the discovery of X rays paved the way for the no less important discovery of radio-activity, other discoveries may revolutionise our present methods. The tendency of the time is to produce more energy by increasing the size and output of the generating apparatus, and the discovery of a simpler method of producing X rays might do away with the bulky apparatus at present in use. Coördination and research are still needed in all branches of radiography. The application of X rays to industrial problems is likely to become general. The exhibition at the Royal Photographic Society will have served useful purpose if it directs the attention of the public to the need for further investigation and for the whole-hearted support of the efforts of medical men and scientists in this direction. An appeal will shortly be issued for funds to establish a memorial to the late Sir James McKenzie Davidson, and a suitable form for this to take would be the foundation of a Radiological Institute for teaching and research. Attached to the institute should be a historical museum

containing collections of apparatus, tubes, and prints, demonstrating the early work and subsequent advances, and the contents of the museum should be constantly kept up to date. Such an institute would become a centre for the coördination of the developments in all branches of radiography—medical, industrial, and scientific.

BLOOD-PRESSURE OBSERVATIONS IN SURGICAL OPERATIONS.

THE first Bulletin of a National Anæsthesia Research Society in U.S.A. deals with the importance of blood pressure observations before and during surgical operation. The systolic and diastolic pressures are taken by the auditory method, using the armlet and snugly binding the stethoscope below it with elastic webbing. Readings can then be taken without disturbing sterile sheets or the continuity of anæsthesia. If the diastolic pressure is between 25 and 75 per cent. of the systolic a case is probably operable, if outside these limits probably inoperable. During operation a 10 to 15 per cent. increase in pulse-rate without change of pressure, or 10 to 15 per cent. decrease in blood pressure without change in pulse-rate, is safe. A 15 to 25 per cent. increase in pulse-rate, with 15 to 25 per cent. decrease in blood pressure, is dangerous. A progressively increasing pulse-rate above 100, with systolic pressure falling to 80 or less, and a pulse pressure (difference between systolic and diastolic pressures) of 20 or less, lasting more than 20 minutes will be fatal. The condition of shock so denoted results in a vicious circle, the low blood pressure and stagnation of blood flow occasioning increasing failure of heart and brain. The anæsthetist must avoid over-dosing the patient in an effort to please the surgeon, who may be demanding a flabby musculature. Relaxation extends to the non-striated muscle, and shock results from hypostatic congestion of blood in the generally relaxed capillaries and veins of the body. Nitrous oxide and oxygen anæsthesia is the best preservative against shock; it does not relax muscle.

BLIND MASSEURS.

THE Association of Certificated Blind Masseurs, registered last July, is now licensed under the Board of Trade. The objects of the Association, over which Sir Arthur Pearson presides, are:—

To promote the welfare and protect and advance the interests of all certificated and qualified masseurs and masseuses who are too blind to perform work for which eyesight is essential.

To assist and secure the recognition and status of such blind masseurs as aforesaid in and for the purposes of their work.

To provide for such blind masseurs any assistance or advantage calculated to help them to work on terms of equality with sighted masseurs.

To promote coöperation in all matters relating to massage and physical culture between the blind and sighted persons.

To advocate and extend the general use or employment of massage and other physical methods or exercises.

Membership of the Association is conditional on the holding of the certificate of the Incorporated Society of Trained Masseuses—the limitation of title is now too familiar to need comment—or that of the late Dr. Fletcher Little, or such other certificate as may be prescribed by the executive council. The registered office of the Association is at 224–6–8, Great Portland-street, London, W.1.

With the objects of the Association we have the deepest sympathy; and it is eminently satisfactory that care has been taken to provide adequate training for all its members. Far the best way to assist the blind is to render them capable of performing useful and remunerative work, and Sir Arthur Pearson's efforts in this direction have been most successful. There is much to be said for choosing massage as a profession for the blind, though, alas, even here, the blind cannot enjoy all advantages possessed by their unafflicted fellow-workers. Many patients require remedial exercises and re-education as well as massage, and then the blind administrator is handicapped. Unless the limitation is recognised, the blind administrator will be tempted to mete out to patients inferior treatment. Teachers of massage will do well to make this clear to their blind pupils.

SEX DISPROPORTION.

IN one of a series of lectures on Social Unrest, delivered at the Royal Sanitary Institute on Feb. 4th, Dr. R. Murray Leslie marshalled in an arresting manner the facts in regard to sex disproportion and its consequences. He started by suggesting that the numerical preponderance of females over males in England and Wales, amounting to a million and a quarter in 1911, had probably exceeded two millions by the end of the war. The figure is a likely one. Male births, it is true, exceed female births by about 4 per cent., but the mortality among infant boys is so much higher than that among infant girls that even in 1911 the excess of females per 1000 males at all ages was represented by a figure of 68 for England and Wales, while it was 62 for Scotland and only 3 for Ireland. Austria, France, and Germany then occupied an intermediate position with 36, 35, and 26 respectively. From these well-established facts Dr. Leslie went on to deduce social, economic, and national consequences of a momentous nature, associating with the disproportion of the sexes some, at least, of the assumed increase in sexual immorality, the falling off of religious observance, and the decline of the birth-rate in certain elements of the population. He concluded with a classification of women into types, and a suggestion that in racial questions women may become the dominant sex. We agree with Dr. Leslie that his classification may be held by women themselves to be presumptuous, and we distrust the value of the attempts, now so often made, to place men or women into categories in accordance with what are called "types."

COCCIDIOIDAL GRANULOMA.

Coccidioidal granuloma, of which Dr. William B. Bowman,[1] of Los Angeles, recently reported five cases with the X ray findings to the American Roentgen Ray Society, is an acute, subacute, or chronic disease due to infection by a parasitic organism known as the *Oidium coccidioides*. It is sometimes called the Californian disease, as with but three exceptions all the reported cases have lived in or visited that State before contracting the disease, a large percentage of them coming from one district—namely, the San Joaquin Valley. The *Oidium coccidioides*, which is a spherical body

[1] The American Journal of Roentgenology, November, 1919.

varying from 7–30 μ in diameter, consists of an irregular protoplasmic body with a double contoured, highly refractile surrounding membrane or capsule, and multiplies by sporulation. The fungus grows on all types of media. The mode of infection in man is unknown. The naked eye and microscopical pathology, especially in the viscera, is practically identical with that of tuberculosis, and a differential diagnosis can only be made by isolation of the organism. This can easily be done by mixing a drop of pus with a 10 per cent. solution of sodium hydrate on a slide with a coverslip. Dickson, who collected 40 cases of the disease in 1915, states that a routine examination of cases clinically tuberculous, in which the tubercle bacillus cannot be found, would probably reveal a great many cases of coccidioidal granuloma. The X ray findings in Dr. Bowman's cases closely resembled those of tuberculosis, the peculiar irregular fuzzy appearance of the periosteum being the only distinguishing feature. Treatment was disappointing, no results being obtained by sodium iodide, tartar emetic, copper sulphate, or autogenous vaccines. In the subsequent discussion Dr. M. P. Burnham reported an unusual instance of early diagnosis by aspiration of a joint, followed by immediate amputation of the shoulder. The case was one of the few on record which had not terminated fatally, and suggested that if an early diagnosis was made, and a radical operation performed, a larger percentage of recoveries might be obtained.

REFORMS IN FOOD CONTROL.

IN a leading article in our issue of Jan. 31st we outlined the principal features of the last Report (Medical Supplement) of the Local Government Board (1918–19). In Section 17 of that report Dr. A. W. J. MacFadden deals with the work of inspectors of foods, and his observations claim attention, particularly where he suggests reform. He refers at length to the inadequate methods of meat inspection which have long been under consideration, and in regard to which the special experience gained during the war has, in his opinion, greatly strengthened the grounds for instituting changes. Attention, for example, is forcibly directed to the lack of system in the inspection and the facility which is afforded for the unchecked disposal of cow carcasses for human food. It is pointed out that a very considerable proportion of the cows slaughtered annually in this country are seriously affected with tuberculosis, while under conditions which normally exist in England and Wales only a small proportion of these cows ever come under inspection at the time of their slaughter. It must be borne in mind that, whatever inspection may be given to meat after it has been dressed and cut into portions for sale, it is generally quite impossible to detect whether or not the meat was derived from an animal in a diseased condition. Dr. MacFadden strongly advocates the promotion of public abattoirs and the compulsory closing of private slaughter-houses, a policy which has been recommended in these columns on many occasions. In the summer of 1918 considerable anxiety was shown by a number of medical officers of health as to the soundness and wholesomeness of the frozen meat which was being delivered in their districts. Some consignments were rejected by the local authorities and returned to the distributing centre. Public anxiety on the score of health, reports Dr. MacFadden, was largely allayed by the activity shown by medical officers of health and their staffs throughout the country in protecting the country against danger from this source, and much credit is due to them for the success achieved at a time when the borderline between safety and danger was often ill-defined, and when all the circumstances offered temptation to a policy of chance.

Dr. MacFadden reminds us that the vast quantities of foods required by our armies led to organised inquiry into the sanitary condition of food-preparing premises. This involved literally thousands of visits by the Board's inspectors of foods to such premises of all sizes and descriptions in different parts of the country, and careful records have been kept of the conditions found and of the improvements effected. A survey of these records shows that while in a number of the larger factories work has been carried out under conditions likely to ensure the production of sound and wholesome foodstuffs, in many others, even of this class, the opposite has been the case, while in a large proportion of the smaller factories and food-preparing places the conditions disclosed were unsatisfactory in the extreme. The energies of the department have been deeply drawn upon by war requirements, but the circumstances gave our officials a farther reaching searchlight than they possessed before. Food control should benefit by this.

DINNER TO SIR JOHN MACALISTER.

WE may remind our readers that arrangements have been made to hold a complimentary dinner to Sir John MacAlister at the Connaught Rooms on Thursday, March 18th. The dinner is given by the Royal Society of Medicine in recognition not so much of Sir John MacAlister's knighthood as of his 33 years of devoted service to the Society. Members are allowed to bring guests, and applications for the tickets should be made at 1, Wimpole-street, London, W.1, to Mr. C. H. Fagge or Mr. A. M. H. Gray, who are acting as honorary secretaries of the dinner committee.

THE number of cases of influenza officially announced in Switzerland in 1918 was 664,463, and in 1919 86,058. In January, 1920, in the Canton of Zürich 650 cases of influenza and 24 cases of encephalitis lethargica were medically reported.

A Board of Enquiry has been set up to bring under review cases of long standing still occupying beds in military hospitals, and to report in detail upon their treatment and disposal. The members of the Board are Mr. H. J. Waring, President, Colonel F. MacLennan, R.A.M.C., Dr. W. E. Wynter, Dr. C. M. Hinds Howell, and Mr. T. H. Openshaw, for orthopædic cases when required.

THE LANCET, Jan. 3rd and 10th, 1920.

THE Manager is grateful to readers who have kindly returned to him their copies of THE LANCET of the above dates. He has been pleased to pay the full price for all copies returned, so far as he has been able to establish the identity of the senders, as he is disposing of the copies again to new subscribers.

THE MUNICIPAL WORKSHOP:

A SCHEME FOR THE POST-SANATORIUM EMPLOYMENT OF THE CONSUMPTIVE EX-SOLDIER.

BY F. STANLEY TINKER, B.A., M.B., B.C. CAMB., M.R.C.S., L.R.C.P. LOND.,
TUBERCULOSIS OFFICER, NORTH-EAST SURREY.

IN the light of the experience gained during the eight years since the commencement of sanatorium treatment for the working-class population, it has become increasingly evident that the removal of a patient from his home for a limited period of treatment is not sufficient to bring about a permanent arrest of his disease. Attention has therefore been drawn more and more, in the last few years, to the necessity of finding a means whereby the benefit gained by sanatorium treatment may be consolidated, and a useful citizen produced. That the length of sanatorium treatment is unduly short, and can only be expected to produce arrest of the disease in a small percentage of very early cases is universally admitted; but, on the other hand, it must be understood that two great factors operate to make a very prolonged stay practically impossible for the average town-dweller. In the first place he is willing to stay until he feels well, and after that he cannot understand the necessity of continuing treatment; in the second place, the needs of his dependents, who are gradually exhausting his savings, will force him to return to earn for them. The enormous cost would also have to be taken into consideration if any material alteration in this respect were to be made. The problem has therefore become one of improving our methods of after-care, and the following scheme is suggested to fill a gap in the sequence of the methods at present at our command.

Every consumptive may be considered as reduced in physical capacity by 50 per cent. for at least 12 months after his return from a sanatorium. If he is fortunate enough, on his discharge, to secure suitable light work which is well within his physical capacity, he may increase his ability to 75 per cent. of the normal, and even eventually, at that particular trade, to 100 per cent. This applies to a certain number of the best cases only; many have achieved this standard in spite of no provision being made for them. There is, however, a larger percentage for whom there is no such hope: either they must remain idle and starve, or they must do full work with the consequent grave risk of relapse. Even in the case of the discharged soldier, for whom provision in the form of pension has been made, there is the same difficulty, for, although not faced with starvation, idleness, which is only possible to the lowest type, soon becomes unbearable and, in spite of advice, he takes unsuitable work and frequently relapses. That colonies, where the men may eventually migrate with their families, will help a great many of these men to lead useful lives is quite evident, and as a link in the chain they will be an enormous asset, but unless we are prepared to multiply them to an enormous extent they will but touch the fringe of those requiring some such assistance. In this connexion we must not forget the psychology of the average working man whose mentality will hardly rise to the necessity of the migration, and who will always prefer to remain in his urban surroundings. The following outline is for a scheme, suitable for any township, to provide, in conjunction with other after-care, work of a suitable kind in special workshops within easy access of the patients' homes, and under medical supervision.

The Scheme.

The workshops would be divided into two parts. One part to provide training in suitable occupations which could afterwards be carried on in the second part, or permanent workshop. These should be erected on some site, chosen with a view to its accessibility from the urban districts by tram, bus, or rail; both from the point of view of the men employed, and also for the transport of the materials handled in the workshops. In the case both of the training centre and the permanent employment section the conditions and hours of work would be regulated by the medical officer in charge, who would see the men at stated intervals and assess the number of hours work a day.

While the men are under training they would be in receipt of training allowances from the Ministry of Pensions, as in the case of other disablements, but when training is complete they would pass automatically to the permanent section, where they would be in receipt of their assessed pension, according to their disability, but which would remain between 50 per cent. and 100 per cent. of the full pension. Their work would be paid at trade-union rates of wages per hour.

Site of Buildings.

As previously stated, the site should be chosen for its accessibility by tram, bus, or rail. It should not be restricted in size, but should allow room for expansion, with a view to the possibility of including some of the houses of the town building scheme specially allocated for the discharged soldier. With this end in view it would be well to avoid a site surrounded by a populous neighbourhood, or placed in any position where it might acquire the stigma of public curiosity or pity.

The following estimate has been based upon the requirements of the discharged ex-Service men in a population of 70,000 to 80,000.

The following buildings would be required:—

A workshop for training, 20–25 benches.
A workshop for permanent employment, 20–25 benches.
A recreation room and meal room, kitchen, and manager's office.
Instructor's room, implement room, and store room for materials.
Lavatory and washing accommodation.

The buildings, which it would probably be found most economical to obtain of wood, should be lofty, light, and well ventilated by good window space at each side, allowing effective cross-ventilation. They should be heated by a hot-water system and be connected with the electric main. It is not necessary to have an open-sided shed nor to expose the men to extremes of temperature. The ideal would be fresh air and equable temperature.

Work.

This should consist of light manual employment in selected trades, graded from fairly heavy work to the lightest possible for the less able. Two examples which fulfil these requirements would be carpentry and cabinet-making for the more able men, basket-making for the less able men. This side of the scheme is one of infinite difficulty, and upon the correct selection of trades success or failure will rest. Many suitable trades have been cited by the Ministry of Health (in Dr. J. E. Chapman's Memorandum on Colonies), but a great deal will depend upon local demand and facilities, and each particular district should select for its own needs. In this connexion it may be pointed out that the Ministry of Health are arranging for 1000 places for the training of men in existing sanatoriums, and an effort should be made to coördinate the work with them and to concentrate on the same trade, so that the sequence may not be broken, and a definite occupation may be provided for the man on his return home. Outdoor work for a previous town-dweller is not suitable where a living wage is to be earned, nor where large numbers of previous industrial workers are catered for. At the same time, the cultivation of interest in allotment gardening while the patients are under industrial training, would be of great value, as it would tend, at any rate in the summer, to lessen the time spent by the men in their own homes.

Meals and Hours of Work.—Staff.

The foregoing has indicated the necessity of providing meals and recreation during leisure hours. It will be necessary to provide a good mid-day meal, so that no energy is lost by the men having to return some distance home and back. The time gained could profitably be spent in rest. Tea, while not essential, could usefully be added and give a beneficial half hour's

rest during the afternoon. The meals should be provided at cost price.

The shops would be open for eight hours a day, and five and a half days a week, but it would depend on the physical fitness of the worker how many hours he would be able to do. The day's work would usefully be divided up as follows: 8.30–12.30, work; interval for lunch and recreation. 2–4, work; interval for tea. 4.30–6.30, work; close.

At first a man will probably only be able to work the morning hours, but eventually many, if not the majority, will increase to the full day. The assessment of hours of work would have to be regulated by the medical officer, who would each week issue a time-table to be followed rigidly. Each hour of work should receive the wage corresponding to the union rate for that trade, irrespective of the actual amount turned out, thus making the scheme fulfil the rôle of the philanthropic employer.

The staff necessary would include the medical officer, who would probably be the tuberculosis officer for the district, and an efficient manager, who would control the business side of the shops, and see that the medical officer's instructions were conscientiously followed. He would be responsible to a committee of management appointed by the local body to whom the scheme was attached, and to whom they would be responsible. It would also be necessary to provide a capable instructor for each trade, both for the training of the men and the control of articles made in the permanent shop. A small staff would also be required to run the canteen and look after the provision of meals.

Home Visits.

We must not, however, rest when we have planned out the day's work of the men. The chief criticism which would come from the promoters of the colony system would be that "any scheme which does not include the whole life of the consumptive must end in failure." Here I am in entire agreement, and I would even go almost so far as to say that our efforts still tend to tackle tuberculosis from the wrong end, and that we should pay far more attention to the present and future homes of the patients rather than attempt to remove them to the distant hills and solitudes of colonies. As part of the scheme I would advocate an active home-visiting schedule controlled from the local dispensary, under which the visitors would endeavour by persuasion, education, and enlightenment, to help the consumptive to cure himself.

Finance.

At the present moment the Ministry of Health do not possess powers to make grants in aid of any but residential institutions for tuberculosis, and pressure will have to be brought to bear on the Treasury to sanction such a grant. This is, however, not an insurmountable obstacle, as already the Ministry are troubled to know what is to become of the men, who are to be trained in sanatoriums, when again turned out into the world, and they will, I think, welcome any proposition which holds out hope of providing this at a reasonable cost. To make any accurate estimate of the total outlay necessary for the buildings and land is, of course, impossible, as this will vary in the different localities. Nor is it possible to give an idea of the value of the labour of tuberculous subjects, which is an interesting question not yet worked out. If properly managed it should cover the cost of wages, and even in time produce a small profit, and in this way reduce the maintenance grant. I estimate that a sum of 30*s.* per head per week would cover cost of upkeep of buildings and plant, power, heating, lighting, water, rates and insurances, resident caretakers, cook, efficient instructors, and some amount of unproductive labour. In some cases, after a period of 12 months to two years, the men will be fit to draft into ordinary industry—that is, after overcoming the period when relapse is most likely. In other cases, of course, the period would be longer, and in some cases permanent. The loss incurred by this latter group would have to be placed against the gain of preventing infection of ordinary industrial workshops and the consequent fresh incidence of tuberculosis on their release from supervision and control.

Summary.

The objects claimed for this scheme are briefly as follows:—

1. Economy in the long run. Less initial outlay. Less frequency, and eventually almost total abolition of relapse, and the production of useful work by an otherwise idle population.

2. Immediate relief. Some such scheme could be put into working order while the plans of colonies are still being prepared.

3. An outlet for the men when their time of training under the Ministry scheme is complete instead of their being faced with the open market of competitive labour in the old unsuitable workshop.

4. It will work in and not against any existing or proposed scheme, and will form a very necessary adjunct to them.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Appearance of Typhus in Paris.

A DOZEN cases of typhus were found in Paris last week, the bacteriological diagnosis having been established at the Pasteur Institute. The patients were isolated immediately, and the Prefect of Police has issued instructions that the search for and investigation of any new cases are to be conducted with special care. Till now there have been no new cases, and it is hoped that the little epidemic will not spread. In 1919 a similar restricted epidemic broke out at Marseilles among German prisoners, but was soon checked. The cases in Paris at present have occurred among Polish workmen brought to Paris by refugees from provinces formerly invaded by the Germans. The situation in these provinces also gives rise to some anxiety, as many Polish workmen in a deplorable sanitary condition are arriving there daily. At Toul they have had to be put into barracks and subjected to vigorous disinfection. In this town, which is the point of arrival of the trains bringing Polish labour, there is an emigration bureau, but unfortunately no sanitary control has yet been organised, and it is to be feared that these workmen, once dispersed in the war area for the reconstruction of the towns, may propagate the epidemic throughout the north and north-east of France. In this connexion M. Gabriel Bertrand, professor at the Sorbonne, and M. Blocq Rousseau, have submitted to the Academy of Science an important communication showing the advantages for the disinfection of clothes infested with typhus-carrying lice and of ships infested with rats harbouring plague-carrying fleas, of employing chloropicrine, which was used during the war in offensive gas attacks. This product, of which there is a large quantity available, would be extremely useful if used, as suggested by Roux, in closed vessels.

The Enlargement of the Paris Hospitals.

There has been an enormous increase in the population of Paris, since many of the refugees from the invaded provinces who lived there during the war prefer to stay in the capital, and others cannot return to their ruined homes. The existing hospitals have thus become quite inadequate for the large number of sick people desiring admission. Lying-in hospitals especially are overcrowded, as was indicated last week, and it has been found necessary to vote grants to provide pregnant women with the means to have their babies at their homes. M. Mesureur, Directeur de l'Assistance Publique at Paris, has furnished to the Municipal Council a report on the enlargement of the hospitals. A sum of 150 million francs is estimated in the report as required for new buildings to be erected in the course of the next ten years. The amount needed for upkeep, now about 2,725,000 francs a year, will be some 10 millions.

Feb. 16th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Dublin and the R.A.M.C. Memorial.

A PUBLIC meeting was held last week in the Royal College of Surgeons in aid of the Royal Army Medical Corps Memorial Fund. The President of the College was in the chair, and among those who spoke were the Lord Chancellor of Ireland, the Primate, the President of the Royal College of Physicians, Major-General Gerrard, A.M.S., and Colonel William Taylor, C.B. It was originally intended that the funds collected should go in part to the erection of a memorial in London, with replicas in Dublin and Edinburgh, and in part to provision for the widows and children of the men of the Corps who had lost their lives in the war. It appears that it has been necessary to abandon the latter purpose, and it is now intended to devote all the funds received to the erection of a memorial or memorials.

The Irish Nursing Council.

The constitution of the first General Nursing Council for Ireland was announced last week in the *Dublin Gazette*. It consists of 15 persons, of whom five are medical men and nine are nurses. The medical members are: Dr. E. Coey Bigger, Colonel Sir Arthur Chance, Colonel W. Taylor, Mr. R. J. Johnstone, and Dr. P. T. O'Sullivan. The representation of the various nursing organisations appears to have been fairly arranged.

Nurses' Salaries.

The Belfast Board of Guardians have decided to increase the salaries of probationer nurses as follows: First year, to £15; second year, to £20; third year, to £25; fourth year, to £30. The average salary paid to nurses in a large number of infirmaries and hospitals in the United Kingdom was £121, while the present salary in the Belfast Workhouse was £59, by far the lowest as compared with any institution in England or Scotland. The average now proposed will amount to £90. By revising the dietary of patients and officials in the workhouse the Belfast guardians are effecting a saving of £3500 per annum. It was stated at the weekly meeting on Feb. 10th that the week before there were 230 scarlet fever patients; 21 had since been admitted, 34 discharged, 1 had died, so that on Feb. 7th there remained 216. Purdysburn scarlet fever wards are also full at present. It was also decided to form a further dispensary subdistrict in Ballymacurett, a crowded working-class district of Belfast.

Feb. 17th.

SAVE THE CHILDREN FUND.

AN appeal has been issued by the Labour Committee of this Fund to labour organisations, calling attention to the urgent need for sending relief to the children in the famine areas of Europe. The labour organisations in neutral countries, such as Sweden and Switzerland, have already done much by feeding and housing children from the famine areas. Although it is assumed this cannot be done here, nevertheless there are many ways in which help can be given. The appeal says:—

"The position in the coming winter, even in Great Britain, will be difficult, with the high prices of milk and other foods, but whatever difficulties have to be faced here are not to be compared with the suffering which thousands of children are undergoing in the distressed countries. We feel sure that your organisation will most readily help in this matter. If all the members of each labour organisation would give something, however small the sum, the result would be to save not merely the health but actually the lives of great numbers of suffering children. Nor could any act provide a more genuine demonstration of the solidarity of the workers the world over."

It is suggested that the fund raised through this appeal should be permanently maintained, and made applicable to the alleviation of the needs of the children of workers in this as well as in other countries. The appeal is signed amongst others by Mr. W. Adamson, M.P., Mr. J. R. Clynes, M.P., Mr. George Lansbury, Mr. J. H. Thomas, M.P., Mr. Arthur Henderson, M.P., and the secretary, Mrs. Pete Curran, who can be addressed at 28, Tavistock-square, London, W.C.1

HOUSING NOTES.

The "Daily Mail" Exhibition at Olympia.

THOSE interested in the many amenities of the up-to-date house will do well to set aside a whole day for their visit to Olympia. They should plan their arrival for the early morning and visit the more popular exhibits first; by midday there are queues waiting for admission into some of the houses, and exhibitors are far too busy to give away more than a small proportion of the interesting information at their disposal. Thus the all-electric house, and the sectional wooden house made by the Norwegian House-Building Co. are amongst the exhibits which should be seen before 11 A.M. The Ministry of Health's annexe may be visited at leisure, but an attendant is required to explain the exhibits. Those who examine the truncated model cottages nearly all comment upon the small size of their rooms. This is partly due to an optical delusion, and it is to be regretted that adverse criticism should be passed without any demonstrator being present to correct faulty impressions.

Some of the exhibits are of special medical interest. Such are the child welfare exhibit, managed by the Middlesex Hospital; an electric "solarium," which in spite of its name is admirably appointed as a radiant-heat bath; electric sterilisers, which are efficient if expensive—one manufactured by the General Electric Company, is particularly ingenious; and, finally, an improved water-closet seat well designed to prevent the possibility of contamination by those using it. Perhaps Messrs. Beck's electric laundry should be mentioned in this connexion; it is an economical outfit both as regards time and power, and the larger plant has a great advantage in that the clothes can be sterilised at the same time as they are cleaned.

The Ideal House.

Those who are seeking the ideal house find themselves confronted at the outset with a wide range of material from which to select its components. The usual brick has scarcely an advocate, because it does not need one. Some very tempting houses are built entirely from wood. One wooden cottage in particular attracted widespread admiration. It was built of unseasoned English elm and had been approved by the Ministry of Health, who, despite its thatched roof, give it the full status of a permanent building and a subsidy allowance of £150. This enables the house—three bedrooms, two living-rooms, kitchen, scullery, and stove—to be built for £300. The remarkable cheapness is due mainly to a saving in the raw material, which is bought at something under 3*d.* per cubic foot. The house can be ready for occupation within eight weeks of cutting down the trees needed for its construction. It might be feared that if this type of construction became popular the stock of elm in this country would be rapidly used up, but no one who knows anything about agricultural labour would share this apprehension. Concrete blocks offer a formidable rivalry to wood, and there are many machines exhibited which manufacture the blocks by unskilled labour "while you wait." The most successful, in our opinion, are those which are made on the principle of the skeletal system—hollow blocks, rigid yet light, with the advantage of the adiathermanous air-spaces.

Heating and lighting form a special section of the exhibition, coal-gas and electricity being the foremost competitors. The cleanliness and convenience of electric heating are apparent to all, but a few calculations make it evident that, even with electricity at 2*d.* or 1½*d.* a unit, economy is still on the side of coal-gas. An interesting plant for heating and lighting from No. 1 petrol spirit should not be overlooked. Although the report of the Coal Smoke Abatement Society published in THE LANCET on Nov. 17th, 1906, is quoted by one gas company in a well-informed pamphlet on the hygiene of gas fires, there was nothing in the exhibits suggesting that the comfortable, extravagant coal fire has been largely superseded.

"Labour-saving" has now become a catch phrase, and many old and well-advertised appliances appear under its guise. The most interesting are usually dependent on electric power, and will acquire considerable significance if the Government's plan for supplying electricity on a large scale should come to fruition. Various plants for the generation of electricity are to be seen, but all are too expensive to be of service to those who cannot afford to pay for labour. Garden and poultry exhibits are in profusion and of high quality. The exhibit of the Board of Agriculture deserves special mention. A model allotment shows vegetables in hearty growth, while at a stall instruction is given in bottling fruits, specimens being shown just as they were prepared in a London cottage to show the different utensils needed.

The World Shortage of Houses.

La Rochefoucauld declares that there is often something not displeasing to us in the adversity of our best friends. His remark might well be illustrated by an article appearing in the number of the official journal *Housing* published on Jan. 5th, and containing a summary of the housing conditions in a number of civilised countries throughout the world. The article in question deals in succession with Canada, where in spite of a Government loan of £5,000,000, the progress of housing has not been rapid; Australia, where the larger cities are suffering from a very pronounced shortage of houses, due in part to the steady flow of the population from country to town; New Zealand where a Parliamentary Committee has recommended the formation of a National Housing Department, and the allocation of £2,000,000 to a housing scheme for families with, in general terms, an income less than £300, plus £25 allowance per child where there are more than three children. South Africa, India, the United States, and France are in the same plight. In Italy, new housing at the cost of £10,000,000 is anticipated, and the Ministry of Industry is making an annual State grant of £400,000, which may be increased if the inhabitants and the coöperative societies show the requisite activity. Germany has perhaps the most acute problem of all, and has been forced in some towns to adopt rationing of house room and the billeting of civilians in private houses. Norway, Sweden, Holland, and Switzerland have all to face housing problems in acute form.

A Stitch in Time.

In addition to the world shortage consequent upon pre-war neglect, as well as upon the loss of labour during the five years of war, we are, in this country, faced with a fresh difficulty. While valiant efforts are being made to raise new houses throughout the land, practically nothing is being done to remedy the wear-and-tear of the large and constantly growing number of working-class houses that are tottering on the brink of the chasm between the dilapidated house which can, and the corresponding house which cannot, be made fit for human habitation. The unfit houses are continuing to be unfit, are becoming rapidly more unfit, and unless quickly patched or reconstructed will deteriorate beyond repair. If local authorities allow that to happen, much of their present effort at rehousing will be wasted, and they will be back in the old game of trying to catch up with the creation of the slum and of never quite succeeding before the next patch of slum has grown.

Measles Spread by Overcrowding.

The ill-effects of overcrowding are always accentuated by the advent of any infectious disease. This was very markedly the case at Barnsley in the spring of 1918, when the town was visited by an epidemic of measles. The medical officer of health, Dr. F. A. Sharpe, has written a special report dealing with this epidemic, in which he attributes a very important rôle to the bad housing conditions. For want of adequate accommodation the young patients had usually to be nursed in the room which served as living room for the rest of the family and as reception room for the neighbours. Besides spreading the disease abroad, this kind of sick room cannot be ideal from the patient's point of view. No less than 232 deaths were recorded during the year from measles and its complications.

The Services.

ROYAL ARMY MEDICAL CORPS.

Lieut.-Col. H. M. Nicholls retires on retired pay.

Temp. Lieut.-Col. J. F. Haswell (Col., T.F.) relinquishes his temporary rank on ceasing to be employed in the Army Medical Service.

Major R. G. H. Tate to be temporary Lieutenant-Colonel whilst specially employed.

The undermentioned relinquish the acting rank of Lieutenant-Colonel: Major and Bt. Lieut.-Col. G. W. G. Hughes; Majors R. C. Wilson, H. W. Farebrother, G. A. K. H. Reed; Capt. J. R. Hill.

Temp. Capt. W. N. Parker relinquishes the acting rank of Lieutenant-Colonel and reverts to the acting rank of Major.

Major W. Tibbits is placed on retired pay.

The undermentioned relinquish the acting rank of Major: Capts. W. E. Adam, J. C. Sproule, A. L. Stevenson, W. H. S. Burney; Temp. Capt. and Bt. Major R. Bruce-Low; Temp. Capts. A. W. Comber, J. R. Pate, R. Heaton, G. T. Foster-Smith, E. B. Barton, F. R. Barwell, A. G. Anderson.

To be temporary Captains: H. R. McNair, late Can. A.M.C., H. H. Perry, late Can. A.M.C.; Temp. Lieut. P. Carroll.

Officers relinquishing their commissions:—Temporary Majors retaining the rank of Major: R. H. J. Swan, S. M. Cox, R. L. Davies. Temp. Capt. (acting Major) W. N. Parker and Temp. Capt. G. L. Leggat are granted the rank of Lieutenant-Colonel. Temporary Captains granted the rank of Major: H. H. Sampson, W. V. Robinson, J. Porter, C. D. Coyle, E. F. C. Dowding, W. H. Clements, J. Rodger, A. L. Lockwood. Temporary Captains retaining the rank of Captain: G. D. Fairley, T. M. J. Stewart, B. V. Ward, J. R. K. Thomson, A. R. Hargreaves, C. K. Sylvester, E. A. A. Saunders, J. W. E. Cole, N. I. Sinclair, E. K. Gawn, N. B. Capon, R. C. Cooke, P. C. West, S. Forrest, N. F. Graham, H. M. MacKenzie, A. J. McCreadie, I. Feldman, F. C. Robbs, N. J. Judah, R. T. Todd, W. H. Ogilvie, E. E. Lightwood, P. Carroll, W. H. Sheffield, J. F. Allen, J. Caton-Shelmerdine, E. R. Griffiths, A. G. Price, W. E. Fetherstonhaugh, T. L. Clark, H. S. De Boer, G. W. Smith, C. E. Waldron, O. F. D. Airth, C. W. S. Davies-Jones, J. C. Waitham, J. McI. Falkiner.

SPECIAL RESERVE OF OFFICERS.

W. McK. H. McCullagh relinquishes the acting rank of Lieutenant-Colonel.

Captains relinquishing the acting rank of Major: J. Kennedy, G. T. Mullally, T. McEwen, H. W. Maltby.

Capt. B. W. Jones relinquishes his commission and retains the rank of Captain.

TERRITORIAL FORCE.

1st Southern General Hospital: Major (acting Lieut.-Col.) W. Kirkpatrick relinquishes the acting rank of Lieutenant-Colonel on ceasing to be specially employed.

TERRITORIAL FORCE RESERVE.

Capt. W. Hunter, from 4th London General Hospital, to be Colonel.

ROYAL AIR FORCE.

Medical Branch.—Flying Officers to be Flight Lieutenants: T. Montgomery, C. F. Eminson, R. D. Jones. The undermentioned are transferred to the unemployed list: Capts. S. J. Moore, D. Guthrie; Lieut. J. Stark.

Dental Branch.—N. H. Medhurst is granted a temporary commission as Lieutenant. Lieut. P. E. Bernard relinquishes his commission, and is permitted to retain his rank.

INDIA AND THE INDIAN MEDICAL SERVICE.

Col. J. K. Close to be Inspector-General of Civil Hospitals, United Provinces, vice Lieut.-Col. W. H. E. Woodwright resigned. The Governor in Council has nominated Col. J. B. Smith as official additional Member of the Legislative Council of Bombay Presidency, vice Major-Gen. W. E. Jennings resigned. Lieut.-Col. R. G. Turner, civil surgeon, has been transferred from Mussoorie to Allahabad. Lieut.-Col. G. Hutchison, civil surgeon, has been transferred from Allahabad to Gorakhpur. Major Harper Nelson has been appointed Professor of Materia Medica at the Lahore Medical College. Air Lieut.-Col. J. Swann reverts to civil employ in the Punjab. Capt. R. B. Lloyd has been appointed to the Civil Medical Department of Bengal. Capt. J. H. Smith, Capt. J. W. Lane, and Capt. C. S. Smith are promoted to Acting Lieutenant-Colonels. Brevet-Major W. McNaughtan, R.A.M.C., military medical officer, has been appointed to hold civil medical charge of Rooker, in addition to his duties, vice Capt. R. V. Clarke, R.A.M.C. The services of Capt. D. O'Malley, R.A.M.C., have been placed at the disposal of the Government of India. Major

A. H. Hayes, R.A.M.C., has been appointed to hold Civil Medical Charge of Naini Tal, in addition to his own duties, vice Lieut.-Col. T. Humber, civil surgeon, granted leave. Dr. R. G. Griffin, Deputy Sanitary Commissioner for Anti-Hookworm Campaign, has been appointed Civil Surgeon, Jalpalguri, in addition to his own duties, vice Major R. E. Lloyd, granted leave for one year. Lieut.-Col. E. V. Hugo has been appointed Professor of Surgery, King Edward Medical College, Lahore. Major C. A. Gourlay, D.S.O., civil surgeon, has been posted to Mymen Singh. Col. J. K. Close to be a Member of the United Provinces Legislative Council, vice Col. C. Mactaggart, C.S.I., C.I.E., resigned. Major R. H. Bott has been appointed Professor of Operative Surgery, Lahore Medical College; Mr. R. L. Stevenson reverts to Bengal.

THE HONOURS LIST.

Capt. H. M. Collins, I.M.S., and Major (acting Lieut.-Col.) A. Spitteler, I.M.S., have been appointed Officers of the Order of the British Empire for valuable services rendered in connexion with military operations in Southern and Central Kurdistan.

BROUGHT TO NOTICE.

The names of the following medical officers are brought to notice for valuable services rendered during the military operations in Central and Southern Kurdistan:—

Lt. (acting Capt.) L. G. Blackmore, R.A.M.C.; Capt. H. M. Collins, I.M.S.; Maj. J. F. Grant, R.A.M.C. Lt.-Col. (temp. Col.) J. A. Hamilton, C.M.G., I.M.S.; Temp. Capt. W. G. Miller, I.M.S.; Capt. (acting Maj.) M. Purvis, I.M.S.; Maj. (acting Lt.-Col.) A. Spitteler, I.M.S.; Capt. (acting Maj.) C. J. Stocker, M.C., I.M.S.; Capt. (acting Maj.) J. M. Weddell, R.A.M.C.

URBAN VITAL STATISTICS.

VITAL STATISTICS OF LONDON DURING JANUARY, 1920.

IN the accompanying table will be found summarised statistics relating to sickness and mortality in the City of London and in each of the metropolitan boroughs. With regard to the notified cases of infectious disease it appears that the number of persons reported to be suffering from one or other of the ten diseases notified in the table was equal to an annual rate of 9·2 per 1000 of the population, estimated at 4,026,901 persons; in the three preceding months the rates had been 10·1, 11·1, and 10·7 per 1000. Among the metropolitan boroughs the lowest rates from these diseases were recorded in Kensington, Hammersmith, the City of Westminster, St. Marylebone, and Woolwich; and the highest in Fulham, Finsbury, Bethnal Green, Deptford, Greenwich, and Lewisham. The prevalence of scarlet fever showed a considerable decrease—27 per cent.—from that recorded in the preceding month; this disease was proportionally most prevalent in Finsbury, Deptford, Greenwich, and Lewisham. The Metropolitan Asylums Hospitals contained 2476 scarlet fever patients at the end of the month, against 2293, 2848, and 2841 at the end of the three preceding months; the weekly admissions averaged 280, against 340, 427, and 350 in the three preceding months. Diphtheria was slightly more prevalent than in December, and has shown a progressive increase since August, 1919: the greatest proportional prevalence of this disease was recorded last month in Fulham, Holborn, Bethnal Green, Wandsworth, and Lewisham. The number of diphtheria patients under treatment in the Metropolitan Asylums Hospitals, which had been 1001, 1168, 1405, 1572, and 1845 in the five preceding months, further rose to 1971 at the end of January; the weekly admissions averaged 263, against 125, 180, 207, 215, and 239 in the five preceding months. The prevalence of enteric fever was about double that in the preceding month; of the 42 cases notified last month 4 belonged to Fulham, 3 to the City of Westminster, 3 to Hackney, and 3 to the Port of London. There were 25 cases of enteric fever under treatment in the Metropolitan Asylums Hospitals at the end of the month, against 47, 44, and 25 at the end of the three preceding months; the weekly admissions averaged 4, against 6, 5, and 2 in the three preceding months. Erysipelas was proportionally most prevalent in Chelsea, Finsbury, Bethnal Green, Southwark, Battersea, and Deptford. The 49 cases of puerperal fever included 6 in Islington, 5 in St. Pancras, 5 in Bermondsey, 4 in Lambeth, 3 in Bethnal Green, 3 in Wandsworth, and 3 in Camberwell. The 17 cases of cerebro-spinal meningitis included 3 in Bermondsey, 2 in Hammersmith, 2 in Islington, and 2 in Poplar; while the 2 cases of poliomyelitis belonged respectively to Stepney and Lambeth.

The mortality statistics in the table relate to the deaths of civilians actually belonging to the several boroughs, the

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING JANUARY, 1920.
(*Specially compiled for* THE LANCET.)

CITIES AND BOROUGHS.	Estimated civil population, 1917.	Notified Cases of Infectious Disease.											Deaths from Principal Infectious Diseases.									Deaths from all causes.	Death-rate per 1000 living.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cerebro-spinal meningitis.	Poliomyelitis.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.*	Whooping-cough.	Enteric fever.	Diarrhœa and enteritis (under 2 years).	Total.	Annual rate per 1000 persons living.		
LONDON	4,026,901	—	1261	1213	—	42	—	49	253	17	2	2837	9·2	—	72	19	120	78	5	67	361	1·2	4894	15·8
West Districts:																								
Paddington	122,507	—	31	42	—	2	—	1	6	—	—	82	8·7	—	—	—	—	—	—	4	4	0·4	118	12·6
Kensington	151,535	—	28	35	—	—	—	2	9	1	—	75	6·5	—	3	—	3	2	—	1	9	0·8	198	17·0
Hammersmith	114,952	—	9	27	—	2	—	1	8	2	—	49	5·6	—	—	—	5	1	—	1	7	0·8	130	14·7
Fulham	145,186	—	47	66	—	4	—	1	10	—	—	128	11·5	—	1	2	7	—	—	2	12	1·1	146	13·1
Chelsea	57,368	—	16	13	—	1	—	—	5	—	—	35	8·0	—	1	1	—	—	—	—	2	0·5	60	13·6
City of Westminst'r	122,046	—	35	21	—	3	—	2	2	—	—	63	6·7	—	1	1	2	—	—	—	4	0·4	126	13·5
North Districts:																								
St. Marylebone	92,796	—	22	8	—	—	—	—	4	—	—	34	4·8	—	1	3	—	1	—	3	8	1·1	135	19·0
Hampstead	75,649	—	19	16	—	1	—	1	4	—	—	41	7·1	—	—	—	2	—	—	1	3	0·5	69	11·9
St. Pancras	186,600	—	63	45	—	2	—	5	9	—	—	124	8·7	—	—	—	1	5	—	1	7	0·5	222	15·5
Islington	297,102	—	95	91	—	2	—	6	20	2	—	216	9·5	—	8	2	11	9	—	6	36	1·6	411	18·0
Stoke Newington	47,426	—	17	7	—	—	—	—	2	—	—	26	7·1	—	—	1	2	1	—	3	7	1·9	49	13·5
Hackney	196,598	—	49	67	—	3	—	—	14	—	—	133	8·8	—	3	—	9	9	—	2	23	1·5	247	16·4
Central Districts:																								
Holborn	35,303	—	9	16	—	1	—	—	1	—	—	27	10·0	—	1	1	1	—	—	—	3	1·1	30	11·1
Finsbury	68,011	—	27	16	—	2	—	1	12	1	—	59	11·3	—	1	—	1	—	—	1	3	0·6	114	21·9
City of London	16,138	—	4	3	—	1	—	—	1	1	—	10	8·1	—	—	—	1	—	—	—	1	0·8	15	12·1
East Districts:																								
Shoreditch	89,675	—	29	28	—	2	—	2	6	—	—	67	9·7	—	13	1	4	—	—	3	21	3·1	158	23·0
Bethnal Green	107,362	—	35	52	—	2	—	3	12	—	—	104	12·6	—	4	1	4	4	1	4	18	2·2	141	17·1
Stepney	232,010	—	72	74	—	—	—	1	7	—	1	155	8·7	—	—	—	4	9	—	3	16	0·9	279	15·7
Poplar	143,443	—	34	51	—	1	—	1	7	2	—	96	8·7	—	1	1	6	4	—	7	19	1·7	226	20·5
South Districts:																								
Southwark	167,936	—	56	49	—	—	—	1	18	1	—	125	9·7	—	3	1	2	4	1	5	16	1·2	230	17·9
Bermondsey	107,635	—	33	22	—	—	—	5	6	3	—	69	8·4	—	3	—	4	5	1	3	16	1·9	141	17·1
Lambeth	272,038	—	98	74	—	2	—	4	13	—	1	192	9·2	—	15	—	11	6	—	6	38	1·8	340	16·3
Battersea	150,023	—	45	37	—	2	—	2	14	1	—	101	8·8	—	1	1	7	3	1	3	16	1·4	169	14·7
Wandsworth	300,787	—	101	123	—	1	—	3	22	1	—	251	10·9	—	—	—	7	2	—	2	11	0·5	280	12·1
Camberwell	239,461	—	81	83	—	1	—	3	11	1	—	180	9·8	—	5	1	10	5	—	4	25	1·4	276	15·0
Deptford	103,527	—	53	29	—	2	—	2	8	—	—	94	11·8	—	4	1	3	3	—	1	12	1·5	143	18·0
Greenwich	90,440	—	55	29	—	1	—	1	—	1	—	87	12·5	—	3	—	—	1	1	—	5	0·7	103	14·8
Lewisham	161,405	—	70	62	—	—	—	1	12	—	—	145	11·7	—	—	1	9	3	—	—	13	1·0	174	14·1
Woolwich	131,942	—	28	27	—	1	—	—	10	—	—	66	6·5	—	—	—	4	1	—	1	6	0·6	164	16·2
Port of London	—	—	—	—	—	3	—	—	—	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—

* Including membranous croup.

deaths occurring in institutions having been distributed among the boroughs in which the deceased persons had previously resided. During the four weeks ended Jan. 31st the deaths of 4894 London residents were registered, equal to an annual rate of 15·8 per 1000; in the three preceding months the rates had been 14·1, 14·6, and 14·1 per 1000. The death-rates ranged last month from 11·1 in Holborn, 11·9 in Hampstead, 12·1 in the City of London, 12·1 in Wandsworth, 12·6 in Paddington, and 13·1 in Fulham, to 18·0 in Islington, 18·0 in Deptford, 19·0 in St. Marylebone, 20·5 in Poplar, 21·9 in Finsbury, and 23·0 in Shoreditch. The 4894 deaths from all causes included 361 which were referred to the principal infectious diseases; of these 72 resulted from measles, 19 from scarlet fever, 120 from diphtheria, 78 from whooping-cough, 5 from enteric fever, and 67 from diarrhœa and enteritis among children under 2 years of age. Among the metropolitan boroughs the lowest death-rates from these diseases were recorded in Paddington, Chelsea, the City of Westminster, Hampstead, St. Pancras, and Wandsworth, and the highest in Stoke Newington, Shoreditch, Bethnal Green, Poplar, Bermondsey, and Lambeth. The 72 deaths from measles were 39 fewer than the average number in the corresponding period of the five preceding years; this disease was proportionally most fatal last month in Shoreditch, Bethnal Green, Lambeth, Deptford, and Greenwich. The 19 fatal cases of scarlet fever were 6 in excess of the average, and included 3 in St. Marylebone, 2 in Fulham, and 2 in Islington. The 120 deaths from diphtheria exceeded the average by 59; the greatest proportional mortality from this disease occurred in Fulham, Hackney, the City of London, Shoreditch, Battersea, and Lewisham. The 78 fatal cases of whooping-cough were 9 in excess of the average; this disease was proportionally most fatal in Islington, Hackney, Bethnal Green, Stepney, Bermondsey, and Deptford. Five deaths from enteric fever were registered during the month, against an average of 7. The 67 fatal cases of infantile diarrhœa were 6 below the average; the greatest proportional mortality from this disease occurred in Paddington, St. Marylebone, Stoke Newington, Shoreditch, Bethnal Green, and Poplar. In conclusion, it may be stated that the aggregate mortality in London during January from these principal infectious diseases was 8 per cent. above the average.

(Week ended Feb. 14th, 1920.)

English and Welsh Towns.—In the 96 English and Welsh towns, with an aggregate civil population estimated at 16,500,000 persons, the annual rate of mortality, which had been 15·3, 15·9, and 15·9 in the three preceding weeks, rose to 17·4 per 1000. In London, with a population slightly exceeding 4,000,000 persons, the annual rate was 18·4, or 1·2 per 1000 above that recorded in the previous week, while among the remaining towns the rates ranged from 8·6 in Barrow-in-Furness, 8·9 in Ealing, and 9·3 in Eastbourne, to 24·2 in Bootle, 27·7 in Liverpool, and 27·9 in Dewsbury. The principal epidemic diseases caused 453 deaths, which corresponded to an annual rate of 1·4 per 1000, and comprised 146 from measles, 120 from whooping-cough, 107 from diphtheria, 56 from infantile diarrhœa, 19 from scarlet fever, and 5 from enteric fever. Measles caused a death-rate of 1·7 in Stoke-on-Trent, 2·1 in Liverpool, 2·4 in Nottingham, 2·8 in Hull, and 3·0 Dewsbury; whooping-cough of 3·6 in Lincoln; scarlet fever of 2·6 in Darlington; and diphtheria of 1·6 in Bolton and 1·8 in Enfield. The deaths from influenza, which had been 85, 66, and 98 in the three preceding weeks, rose to 109, and included 25 in London, 15 in Liverpool, 9 in Birmingham, 7 in Leeds, and 4 in Wallasey. There were 2459 cases of scarlet fever and 2010 of diphtheria under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, against 2487 and 2014 respectively at the end of the previous week: 4 cases of small-pox (2 from East Ham, 1 from West Ham, and 1 from Poplar), of which 1 proved fatal, were also admitted during the week. The causes of 47 deaths in the 96 towns were uncertified, of which 13 were registered in Birmingham and 4 in Liverpool.

Scotch Towns.—In the 16 largest Scotch towns, with an aggregate population estimated at 2,400,000 persons, the annual rate of mortality, which had been 15·3, 15·9, and 14·7 in the three preceding weeks, was again 14·7 per 1000. The 326 deaths in Glasgow corresponded to an annual rate of 15·3 per 1000, and included 7 from measles, 4 from diphtheria, 2 from infantile diarrhœa, and 1 from whooping-cough. The 83 deaths in Edinburgh were equal to a rate of 12·7 per 1000, and included 2 from measles, and 1 each from whooping-cough, diphtheria, and infantile diarrhœa.

Irish Towns.—The 139 deaths in Dublin corresponded to an annual rate of 17·5, or 1·7 per 1000 below that recorded in the previous week, and included 3 from whooping-cough, and 2 each from diphtheria and infantile diarrhœa. The 159 deaths in Belfast were equal to a rate of 20·1 per 1000, and included 11 from measles, 2 each from scarlet fever and infantile diarrhœa, and 1 from whooping-cough.

Correspondence.

"Audi alteram partem."

NEW CLASSIFICATION OF TRYPANOSOMES: A QUESTION OF NOMENCLATURE.

To the Editor of THE LANCET.

SIR,—Having occasion recently to compare the latest edition of Castellani and Chalmers's "Manual of Tropical Medicine" with my own copy of this most useful work, which accompanied me everywhere while I was on service in the East, I was surprised to find myself confronted, in the section dealing with the trypanosomes, with a number of new, "personal," generic names, amongst which the parasites belonging to the well-known genus *Trypanosoma* had been distributed. On investigating further, I ascertained that these new names were all the result of an effort by Chalmers to classify the trypanosomes.[1] In an almost apologetic conclusion to this paper—as if the author felt some attempt to justify himself were necessary—Chalmers adds: "It may be said that the time is not ripe for an attempt to classify the trypanosomes, but someone must make a beginning, and without doubt Professor Minchin would have formulated a classification had he lived."

It may be readily agreed that an endeavour to separate and define the chief types in the case of a large number of different forms, such as are at present collected together in the genus *Trypanosoma*—so far as this can be done upon the available data—is likely to prove of assistance to workers on the group. Even though such a classification can be yet only tentative, it may help to clarify or crystallize, as it were, one's own ideas upon the subject. And it was, I know, Professor Minchin's expressed hope to write next a book dealing specially with the trypanosomes. It is not my intention, however, to discuss here the merits of the proposed classification.

Personally, I should have read Chalmers's paper with much more interest and profit if the arbitrary and at times absurd nomenclature suggested had not produced a feeling of half-amused irritation. And the purpose of this note is to say that I think the time has come to protest strongly against the ever-increasing use of the names of persons for new genera by those working on the protozoa. As the recorder of protozoa for the *Zoological Record* since 1901, I have noticed a marked tendency in this direction, unfortunately, during recent years, but I consider the limit has been overstepped in the paper by Chalmers. This much I can certainly say, as an associate and co-worker with my late professor for a period of many years, that in any regrouping and subdivision which it had seemed good to him to propose he would have had due regard to the established rules and usages of zoological nomenclature; these would not have been violated in the manner which is only too apparent in the case of Chalmers's new names. As for such a verbal atrocity as "*Trypocastellanellanea*"—it could not have been perpetrated by Professor Minchin. I well remember how vastly amused he was over the analogous word "*Spiroschaudinnia*" when that was created.

If the scientific name for an animal affords an indication of the character or affinity of its bearer, or of some biological feature associated with it, this name is of definite and practical use. But any usefulness in this respect is largely stultified by the adoption of a personal name for that of the genus. No information of scientific value is afforded thereby; no clue to the nature or relationships of the type thus named. Take the case of the piroplasms and related forms, for example. Of what use are the names given to *Theileria*, *Nicollia*, *Nuttallia*, *Smithia*, *Toddia*, and so on? I know that these parasites have some connexion with piroplasms, because they are named after well-known contemporary workers on the group. But a generation or so hence, how many of these will be anything but meaningless names to students of the subject?

[1] Jour. Trop. Med., xxi., 1918, p. 221.

And now it is proposed to inflict on us *Lewisonella*, *Castellanella*, *Duttonella*, &c.! So far as I am aware, Professor Minchin never created a personal generic name in the whole course of his scientific research. (The small amœboid parasite, *Malpighiella refringens*, of the rat-flea furnishes only an apparent exception, because it was named after its habitat in the excretory organs, generally known as the Malpighian tubules.)

Helminthologists are much less prone to this bad habit than are, unfortunately, certain protozoologists. I write subject to correction, as I have been away during some years, but I do not think that helminthology is burdened with such names as *Leiperia* or *Leiperella*, *Nicollina*, *Stewartia*, and so on. Apart from the well-known parasite, which was commonly referred to in the E.E.F. as the "Bill Harris" (and even in regard to this it does not appear to be certain that *Schistosoma* is not more correct), there are very few of the important parasitic worms whose generic name is based upon a proper name. Among the protozoa, *Laverania* and *Leishmania*, for instance, are well-established and widely known, and no objection can now be taken to them on the ground of their personal character. But I do wish to make an earnest appeal to those interested in the study of protozoa to refrain in the future from lavish use of proper names for new genera.

More latitude may perhaps be allowed as regards the use of personal names in the formation of new species. Though here also, I know that Professor Minchin expressed himself strongly on more than one occasion in recent years in favour of using, for instance, the name of the host, or of the locality in which it is prevalent, as a suitable specific name for a new parasite. In the last record I compiled I had to include the following new species of parasite created by Yakimoff:—*Prowazekia* [= really, *Bodo*] *ninæ-kohl-yakimovi*, *Trichomonas ninæ-kohl-yakimovi* and *Trypanoplasma ninæ-kohl-yakimovi!* Mme. N. Kohl-Yakimova is an excellent partner; but I think it would have sufficed to commemorate her name in the case of one new species alone.

The very height of absurdity, however, is reached when a personal name and a scientific term are united into one compound word. What does "*Trypocastellanelleæ*" mean? Is "Trypo" a contraction for "Trypano"? Are we henceforth to think of this tribe of parasites as, primarily, corkscrew-shaped, little Castellanis? One could imagine that Chalmers must have felt acutely disappointed that he was precluded from introducing us also to a little Chagas, dividing by multiple fission ("*Schizochagasella*") or to a little Mesnil, living somewhere internally ("*Endomesnilella*"). But I am afraid that Chalmers can have no sense of humour. Seriously, the thing is ridiculous, if I may so express myself. As a matter of fact, one of the recommendations appended to Art. 8 of the Code of International Rules of Zoological Nomenclature runs thus: "Les noms propres ne doivent pas entrer dans la formation des mots composés"; or, as the English version puts it: "The use of proper names in the formation of compound generic names is objectionable." It is—distinctly.

Fortunately, in my opinion, some, at any rate, of the new generic names proposed by Chalmers have no validity. Admitting, for present purposes, that the different types of trypanosome are to be subdivided among different genera along the lines suggested, Chalmers appears to have arbitrarily created names without any reference to the nomenclatural history of the genus. Now Doflein, in 1901,[2] separated *Trypanosoma lewisi*, *brucei*, and other forms from the trypanosome of frogs (*T. rotatorium*), as a distinct sub-genus, to which he gave the name *Herpetosoma*. If, then, the first-named forms are now to be regarded as possessing generic rank, the sub-generic name *Herpetosoma* has priority and becomes raised to the rank of genus, the type species being *Herpetosoma lewisi* of the rat. Art. 7 of the International Code runs thus: "Un nom générique passe au rang de nom sub-générique quand le genre passe au rang de sousgenre, et réciproquement." Therefore, Lühe had no right to ignore Doflein's name *Herpetosoma* when, in 1906, he proposed the generic name *Trypanozoon* for mammalian trypanosomes.[3] For the time being *Trypanozoon* became a synonym. If, however, it is now considered preferable to remove the pathogenic mammalian forms from the genus containing *lewisi* and associated parasites of small rodents, we can correctly and most fittingly restore the name *Trypanozoon* for the former; it is, at any rate, much more suitable than *Castellanella*. We should have then *Trypanozoon gambiense*, *brucei*, *evansi*, &c. There is therefore, I think, no justification for *Lewisonella* and *Castellanella*. I fear I cannot at present facilitate, likewise, the *exit* of *Duttonella*; but perhaps some authority on spirochætes can assist? To complete the enumeration, it may be added that, if the trypanosomes of fishes are generically distinct from *T. rotatorium*, their generic name should be *Hæmatomonas*, Mitrophanow, 1884 (this name was adopted by Lühe). And if those of birds are again distinct, their generic name should be *Trypanomorpha*, given by me to the trypanosome of the little owl (*T. noctuæ*) in 1906.

One further point in conclusion. Chalmers separates the Uganda parasite of sleeping sickness from Dutton's form *T. gambiense*, as a distinct species, *T. castellanii*. As I pointed out at the time,[4] and again in my article on the Hæmoflagellates,[5] the specific name *castellanii*, Kruse, is in any case a synonym, antedated by the name given by Castellani himself, when he made known his most important discovery of the parasites in the cerebro-spinal fluid—viz., *ugandense*—"from the country where I found it first." If the suggested separation of this form is adopted, its correct specific name is *ugandense*; and we then have the useful series *—gambiense*, *ugandense*, *rhodesiense*, and *nigeriense*.

It is greatly to be regretted that an interesting paper like this by Chalmers should lose much of its attractiveness by reason of its errors, both of commission and omission, in regard to the nomenclature. It is, indeed, to be hoped, however, that in the next edition of the "Manual of Tropical Medicine," these will not be repeated.

I am, Sir, yours faithfully,

Lister Institute of Preventive Medicine, S.W., Feb. 14th, 1920. H. M. WOODCOCK.

[2] "Die Protozoen als Parasiten und Krankheitserreger," 1901 edition, p. 60.

[3] M. Meuse, "Handb. d. Tropenkrankht.," 1906 edition, vol. iii., p. 92.

[4] Zool. Record, 1903.

[5] Quart. Journ. Microsc. Sci., 50, 1906.

CIRCUMCISION AND CONGENITAL HYPERTROPHIC STENOSIS OF THE PYLORUS.

To the Editor of THE LANCET.

SIR,—In THE LANCET of Sept. 20th, 1919, you published a most interesting and suggestive study of congenital hypertrophic stenosis of the pylorus by Mr. H. Tyrrell Gray and Dr. G. R. Pirie, in which reference was made to a possible causal connexion between the presence of phimosis, or preputial adhesions, and the vomiting associated with this malformation of the pylorus in infants. As I understand it, these writers suggest that phimosis may be responsible for the additional spasm which causes a tumid pylorus to block the outlet of the stomach, or it may cause spasm in a healthy pylorus which gives rise to the same clinical phenomena. In both cases the adherent prepuce acts as a source of irritation to the adrenals, and the consequent hyperadrenalism may lead to hypertonus of the pyloric sphincter, whether a tumour be present or not.

A recent case admitted to the East London Hospital under my care seems partially to bear out their contention, which they supported by instances of cessation of projectile vomiting after circumcision. The patient was a boy, aged 5 weeks, with a two weeks' history of vomiting, wasting, and constipation. On admission the child was emaciated and wizened; the vomiting was so projectile in character that, I am told, it was forced some 6 feet away from the infant. Gastric peristalsis was easily observable, but there was some doubt as to whether a pyloric tumour could or could not be felt. The penis was examined and the prepuce could not be withdrawn over the glans. I examined the child on the day after admission with a view to operation, but his condition was so pitiable that I hesitated to do

any abdominal operation, even Rammstedt's, which can easily be finished in a few minutes. It therefore occurred to me to test the value of circumcision. The child was accordingly anæsthetised by the open-ether method, and we took the opportunity of palpating the abdomen. No pyloric tumour could be felt. Circumcision was done, and we were delighted to find that all vomiting ceased and the child began to put on weight—for a week. At the end of this period projectile vomiting again occurred and visible peristalsis was seen. I re-examined the child, and, after due inquiry, came to the conclusion that the recurrence of vomiting could be explained by the fact that the feeds were too large. These were reduced in amount and peptonised milk was given. A further week of apparent prosperity ensued, and then the child refused its feeds and suddenly died.

The post-mortem examination revealed no pyloric tumour, no gastritis, and no obvious cause of death except slight broncho-pneumonia. There were no strictures in any part of the alimentary tract.

This case appears to be strictly comparable to those recorded by Mr. Gray and Dr. Pirie where circumcision has had a beneficial effect on pyloric spasm. However, the fact of recurrence of projectile vomiting, amenable to alteration in the character and amount of the feeds, suggests that other factors are present which one cannot expect to alter by the removal of the adherent prepuce.

I am, Sir, yours faithfully,

Devonshire-place, W., Feb. 12th, 1920. JOSEPH E. ADAMS.

LOCAL ANÆSTHETICS IN INTESTINAL OBSTRUCTION.

To the Editor of THE LANCET.

SIR,—I have noticed that in operations for the relief of intestinal obstruction the vomiting which generally follows the anæsthetic contains stercoraceous material, which during the act becomes drawn into the air-passages. I have therefore decided not to give general anæsthetics in these operations. Indeed, I have carried out many abdominal sections with no anæsthetic; very little pain is caused, and local anæsthetics, such as freezing with ether or ethyl chloride, or the hypodermic injection of β-eucaine, are quite sufficient. By following this suggestion I feel that lives would be saved which now are lost from acute bronchitis.

I am, Sir, yours faithfully,

Deal, Feb. 17th. THOMAS H. MORSE.

IS THERE A PARA-SCARLET FEVER?

To the Editor of THE LANCET.

SIR,—In a letter which appeared in your issue of Feb. 7th Dr. Frederic Thomson asks the reasons for my belief that certain cases of mild scarlet fever were not cases of rubella. Let me make it clear that my statement referred only to cases which had been under my observation during the present epidemic, and not to mild scarlet fever in general. I should be the last to assert that the differentiation of mild scarlet fever from rubella is always possible, although I do believe that the number of instances in which confusion is inevitable should be small.

Part of the answer to Dr. Thomson's query is given by Dr. E. W. Goodall in his letter last week, where he says, "rubella has not been prevalent in London lately, nor is it now," an experience with which I am in complete agreement. Neither have these patients caused any outbreak of rubella in our scarlet fever wards; not a single case of this disease has occurred. Additional arguments are the facts that none have shown catarrhal symptoms, none have presented preponderating enlargement of the mastoid or occipital glands, none have shown an eruption of measly character on the face, limbs, or elsewhere; and where complications have occurred they have been those associated with scarlet fever—i.e., otitis media and cervical adenitis. The raw peeled tongue has been very evident on the fourth day, and typical desquamation has appeared in due course in nearly all cases; this desquamation has reappeared after the second attack.

But the object of my letter was to elicit the experience of others during the present outbreak. I still hold that the number of relapses or reinfections is decidedly in excess of normal, as also is the number of patients who give a history of a previous attack of scarlet fever. Evidently Dr. Goodall cannot corroborate me, but I should like to have some further expressions of opinion. Dr. Goodall will notice that I have taken to heart his reproof with regard to the term German measles; it is justified.

I am, Sir, yours faithfully,

Devonshire-place, W., Feb. 16th, 1920. CHARLES R. BOX.

MEDICAL PRACTICE IN A TRANSITIONAL PERIOD.

To the Editor of THE LANCET.

SIR,—In a leading article in your issue of Feb. 7th you allude to the present very truly as a transitional period of medical practice. Several thousand medical men have returned home after periods of service in the R.A.M.C. with a very different vision of the future of civil medical work. They have learned a good deal to avoid, but they have also learned much they will be willing and anxious to incorporate in any future scheme of medical service. One lesson learned is the value of coöperation. That is a point which does not need to be laboured. My wish is to deal with another matter altogether. Medical officers have not only seen service with units of different kinds, field ambulances, base hospitals, &c., but in many cases have had special courses of training. This tends to an all-round knowledge lacking in the civil general practitioner without these experiences. In the R.A.M.C., among both officers and men, high specialisation is rather discouraged than encouraged. At first sight this looks on a par with general army inefficiency, as compared, for example, with a civil business of vast dimensions. But five years' acquaintance with the R.A.M.C., and the prospect of a return to civil practice, leads me to take another view.

I qualified over 20 years ago, and since then there have been many and huge advances in medicine and allied sciences. What has been the effect on the general practitioner, who makes up the bulk of the profession? Little by little his work has been, and is still being, taken from him, and passed into the hands of specialists working for public bodies, until he is becoming something less than the old apothecary. The establishment of tuberculosis clinics, venereal clinics, infant welfare clinics, &c. (the process is steadily continuing) are nothing more than an open implication that the general practitioner does not know his work and is not to be trusted with these matters. Many years ago I consulted a solicitor for the first, and I hope the last, time. I put the details before him and asked him if it was a good enough case to take to court. His reply was: "I must take counsel's opinion." That is what the general practitioner is coming to. No doubt in the future when he is called to a bedside he will take the temperature and feel the pulse and remark: "Ah, this is a case for a lung specialist," or a heart specialist, or any other specialist, so long as he is not expected to make a diagnosis himself or treat the case on his own responsibility.

Now, who or what is responsible for this position? Partly the scramble for a living, which makes the unfortunate practitioner take a huge list of panel and similar patients, and compels him to "get through" a crowd of 50 or 60 patients in an evening surgery of an hour and a half. That is a point which must be remedied in any future scheme of medical service. But far more than that the responsibility lies at the door of those responsible for medical education. The present student is overloaded with a lot of perfectly useless stuff: there is a hopeless waste of time in lectures on subjects which cannot be taught by lectures, and provision for post-graduate work, without which a man soon drops behind, is only now being talked about as a general necessity.

For qualification purposes there should be one standard throughout the country for a pass examination, and this should represent the minimum require-

ments for a general practitioner—I know how often this has been discussed. Let the examining bodies have their D.P.H.'s, their diplomas in radiology, pathology, and what not, for those to take who desire. For a pass examination no man would be asked such absurd questions as "Discuss the theories of hyperpyrexia," as I was asked. Nor should obscure nervous diseases be given him to diagnose in his clinical examination. But he would be expected to be able to diagnose early pulmonary tuberculosis without having to send round for the tuberculosis expert, and to know how to administer "606" without the aid of the venereal expert. Every man should be taught that the microscope, including the dark-ground condenser, is as necessary a part of a practitioner's equipment as a clinical thermometer or a stethoscope. Also he should be able to do simple serological tests like the Widal. I know this is poaching on the preserve of the specialist, but, after all, is it not better to have 1000 men with a good all-round knowledge than one highly technical expert and 999 ignorant men?

To teach these things, not as a matter of academic interest, but as being necessary to the medical man's future work, would mean a drastic overhaul of the medical curriculum. Such subjects as toxicology and materia medica should be ruthlessly thrown overboard. Lectures on anatomy and systematic medicine and surgery are a waste of both the lecturer's and the student's time. Generally speaking, lectures which cannot be illustrated by experiments or by clinical examples should be cut out. Anatomy can be taught by a good prosector dissecting before a small group of six men much better than by a professor with a wonderful memory and marvellous diagrams. Similarly, pathology can be much better taught in the laboratory than in the lecture-room. The lectures on surgery that I listened to were read verbatim; with a text-book before me I could have made as good a professor. Finally, post-graduate work ought to be compulsory, but at the present time not one man in a hundred can afford the expense of a locum-tenent while he takes out a post-graduate course which he also has to pay for.

These, Sir, are a few ideas which I think need discussion in the transitional period. I have no axe to grind. The form of the future medical service is of secondary importance, but whatever its form I do feel that the medical man of the future should be able to diagnose and treat all the common diseases (and surely tuberculosis and venereal disease are among these) without having recourse to an army of experts, some of whom are only experts in name after all.

I am Sir, yours faithfully,

Feb. 11th, 1920. P. H. A.

*** Our correspondent covers much ground which has formed the subject of discussion, such as the overloading of the medical curriculum, the advantages of a one-portal system, and the necessity for post-graduate revision of knowledge. But his wish to ensure that the general practitioner, properly trained, shall have full chances of success will be seconded by all.—ED. L.

DILEMMA AT COLEFORD: RESIGNATION OF THE ONLY PANEL DOCTOR.—At the last meeting of the Frome (Somerset) board of guardians the relieving officer reported that at Coleford, a large village near Bath, owing to the resignation of a medical practitioner, there was no panel doctor resident there. He understood that the county council had informed the insured persons, who required medical advice, that their expenses in consulting medical men would be refunded. The guardians decided that they could do nothing in the matter.

DEATH OF DR. W. C. LAKE.—William Charles Lake, M.D. St. Andrews, M.R.C.S., L.S.A., died recently at his residence, Teignmouth, Devon, in his ninety-fifth year. The deceased, the son of a surgeon in the Royal Navy, had practised in Teignmouth for over 40 years. He was on the honorary medical staff of the Teignmouth Hospital, for 14 years was medical officer of health for the urban district, and performed much useful work during the outbreak of cholera in 1867. Dr. Lake was highly esteemed and respected at Teignmouth, and when he retired in 1891 was the recipient of a public presentation.

Medical News.

UNIVERSITY OF CAMBRIDGE: DIPLOMA OF PSYCHOLOGICAL MEDICINE.—Courses in preparation for both parts of the diploma are being arranged at the Maudsley Hospital, London, in the afternoons, beginning early in March. Sir Frederick Mott, Dr. F. Golla, Dr. J. P. Lowson, Dr. C. H. Bond, Sir H. Bryan Donkin, Dr. F. C. Shrubsall, Dr. W. MacDougall, and Dr. Bernard Hart will take part in tuition. Dates and hours to be announced later.

ROYAL COLLEGES OF PHYSICIANS OF LONDON AND SURGEONS OF ENGLAND.—At a meeting of Comitia of the Royal College of Physicians on Jan. 29th, and of the Council of the Royal College of Surgeons on Feb. 12th, diplomas of L.R.C.P. and M.R.C.S. were respectively conferred upon the following 67 candidates (including 7 women) who have passed the requisite examinations and have complied with the by-laws of the Colleges:—

Mohamed Khalil Abdel-Khalik, Cairo and Middlesex Hosp.; Henry Edwards Archer, St. Bart.'s Hosp.; Hubertus Adriaan Moorrees Bosman, Heidelberg Univ.; Doris Irene Bosworth, Birmingham Univ.; Percy James Briggs, Cambridge Univ. and Guy's Hosp.; Elliott Fraser Brown, Birmingham Univ.; Joseph Henderson Bulcock, Manchester Univ.; Harold George Burford, Oxford Univ. and Guy's Hosp.; George Frederic Burnell, Charing Cross Hosp.; Frederick Wyndham Chamberlain, Middlesex Hosp.; Gilbert Leedham Clements, Birmingham Univ.; Maurice Coburn, Guy's Hosp.; John Joseph Coghlan, London Hosp.; Bernard Hedley Cole, Cambridge Univ. and St. Bart.'s Hosp.; Alison Margaret Collie, St. Mary's Hosp.; Arthur Cedric Mears Coxon, Cambridge Univ. and Guy's Hosp.; Geoffrey Wright Dando, Birmingham Univ.; Andrew Norman Macdonald Davidson, King's Coll. Hosp.; Charles Owen Davies, Liverpool Univ.; David Justin Davies, Middlesex Hosp.; Thomas Draper, Edinburgh Univ.; William Edge, London Hosp.; Isaac Frost, St. Bart.'s Hosp.; Lawrence Paul Garrod, Cambridge Univ. and St. Bart.'s Hosp.; Mary Isabel Alleyne Grimmer, Durham Univ. and Charing Cross Hosp.; Edward Anthony Hawke Grylls, Cambridge Univ. and London Hosp.; George Cleverdon Hartley, Birmingham Univ., Frank Sutcliffe Horrocks, Manchester Univ.; Charles Arundel Hutchinson, London Hosp.; Evelyn Hope Johnson, Manchester Univ.; Oswald Edward Kennedy, Queen's Univ., Kingston, and London Hosp.; Joseph Victor Landau, St. Bart.'s Hosp.; Frank Fawckner Langridge, London Hosp.; Gordon Parmiter Lindsay, Guy's Hosp.; Patrick Thomas McIlroy, Queen's Univ., Kingston; Syed Francis Mahmood, St. Bart.'s Hosp.; Ida Caroline Mann, Royal Free and St. Mary's Hosp.; Grant Massie, Guy's Hosp.; Tete Mensa-Annan, Cambridge Univ. and King's Coll. Hosp.; Oscar Gerald Misquith, Cambridge Univ. and St. George's Hosp.; Abdel Wahhab Mooro, Cairo and St. Bart.'s Hosp.; Clement Nicory, St. Thomas's Hosp.; Francis Ambrose O'Reilly, Queen's Univ., Kingston, and Charing Cross Hosp.; Spencer Tauria Parker, Otago Univ.; Edgar Francis Jones Peregrine, Cardiff and St. Mary's Hosp.; *George Perkins, Oxford Univ. and St. Thomas's Hosp.; *Hugh Hamilton Perry, Manitoba Univ. and London Hosp.; Norman August Marais Petersen, London Hosp.; Gosford James Preston, Queen's Univ., Kingston, and Charing Cross Hosp.; Leonard Ignatius Roberts, Univ. Coll. Hosp.; Roland Ephraim Rawson Sanderson, Cambridge Univ. and St. Bart.'s Hosp.; Harry Norman Schapiro, Guy's Hosp.; Frank Paul Schofield, Campbell Shaw, and Gerald Maurice Joseph Slot, St. Bart.'s Hosp.; Syed Sarwar Hussain Sofi, Hyderabad and London Hosp.; Saravanamuttu Somasundram, Ceylon and Middlesex Hosp.; Stephen Douglas Sturton, Cambridge Univ. and St. Bart.'s Hosp.; Walter Aslatt Turner, Guy's Hosp.; †Kathleen Suzanne Vine, Royal Free Hosp.; Norman Victor Wadsworth, Guy's Hosp.; Alfred Douglas Weeden, Middlesex Hosp.; Clement John Lethbridge Wells and John Stanley White, St. Bart.'s Hosp.; Kathleen Mary Wilkinson, Birmingham Univ.; Donald Woods Winnicott, Cambridge Univ. and St. Bart.'s Hosp.; and Jane Edith Wood, Leeds Univ.

* Diploma of M.R.C.S. conferred on Nov. 11th last.
† Diploma of M.R.C.S. alone conferred.

The Diploma in Public Health was also conferred (in conjunction with the Royal College of Surgeons) upon the 15 candidates whose names were published in THE LANCET of Feb. 14th, p. 405.—It was decided to hold an examination in Public Health, Parts I. and II., in April next, commencing on the 19th and 26th respectively.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—An ordinary meeting of the Council was held on Feb. 12th, Sir George H. Makins, the President, being in the chair.—It was resolved to grant diplomas of Membership to 65 successful candidates; and diplomas in Public Health were granted to 15 candidates, in conjunction with the Royal College of Physicians of London.—Mr. John Murray was re-elected a Member of the Court of Examiners.—It was resolved to grant the honorary Fellowship to the following surgeons: M. A. Depage, Surgeon to His Majesty the King of the Belgians; M. Pierre Duval, Professeur à la Faculté de Médecine de Paris; Professor J. M. T. Finney, Professor of Surgery, Johns Hopkins University; M. A. Gosset, Professeur à la Faculté de Médecine de Paris; Professor Charles H. Mayo, Professor of Surgery, Mayo Foundation for Medical Education and Research, University of

Minnesota.—It was resolved that the presentation of the diplomas to the newly elected honorary Fellows should take place on July 8th next.—Dr. W. S. A. Griffith was re-appointed the representative of the College on the Central Midwives Board for the period of one year, and the best thanks of the Council were given him for his services on that Board during the past year.—The President reported that he had reappointed Mr. William F. Haslam the representative of the College on the medical board of the University of Wales for three years.—The President reported that in pursuance of the provisions of the Bradshaw bequest he had appointed Sir Berkeley Moynihan as Bradshaw lecturer for the ensuing year.—In accordance with a report from the Committee of Management, certain alterations in the conditions for the examinations in Tropical Medicine were approved and adopted. It was also approved that the Committee of Management should be requested to report on the subject of special diplomas, with appropriate regulations for curriculum and examination in each of the subjects to be dealt with.—A committee to consider the question of the representation of Members of the College on the Council was elected.—The President reported that a meeting of Fellows would be held at the College on Thursday, July 1st next, for the purpose of electing three Fellows into the Council in the vacancies occasioned by the retirement in rotation of Sir Anthony A. Bowlby, Mr. W. Harrison Cripps, and Sir D'Arcy Power. The last day for the nomination of candidates will be March 15th. A voting paper will be sent to every Fellow whose address is registered at the College.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH: MORISON LECTURES.—The Morison Lectures will be delivered before the Royal College of Physicians of Edinburgh by Dr. R. Gundry Rows, C.B.E., on Monday, Wednesday, and Friday, March 1st, 3rd, and 5th, 1920, at 5 P.M. The subject of the lectures is announced as Mental Illnesses.

THE TUBERCULOSIS SOCIETY.—A general meeting of the society will be held at the rooms of the Medical Society, 11, Chandos-street, Cavendish-square, to-day, Saturday, Feb. 21st, at 8 P.M., when Dr. Halliday Sutherland will open a discussion on "The Need for a Diploma in Tuberculosis."

UNIVERSITY OF BRISTOL.—At examinations held recently the following candidates were successful:—

FINAL EXAMINATION FOR THE DEGREES OF M.B., CH.B.

Part II. (completing examination).—Bernard Archibald Astley-Weston, Hilda Mary Brown, Daniel Gingell Cossham, Sukhasagar Datta, and Frederick Viel Jacques.

Part I. only.—Khai Way Chan, Marjorie Wadsworth.

SECOND EXAMINATION FOR THE DEGREE OF B.D.S.

George Norman Beason.

SECOND EXAMINATION FOR THE DIPLOMA IN DENTAL SURGERY.

William Bayly, Leslie Clifford Bodey, and Evan Elwyn Lewis.

EXAMINATION FOR THE DIPLOMA IN PUBLIC HEALTH.

Walter Henderson Scott.

UNIVERSITY OF LONDON.—Dr. Herbert Eldon Roaf has been appointed to the University Chair of Physiology tenable at the London Hospital Medical College, and Professor Thomas Swale Vincent to the University Chair of Physiology tenable at the Middlesex Hospital Medical School.—The Senate has passed a resolution expressing appreciation of the generosity of Messrs. S. B. and J. B. Joel in presenting £20,000 for the endowment of a University Chair of Physics tenable at the Middlesex Hospital Medical School. Steps are being taken immediately for the appointment of the first incumbent of this professorship, which will bear the name of the donors.—A University Studentship in Physiology, of the value of £50 for one year, will be awarded to a student qualified to undertake research in physiology and will be tenable in a physiological laboratory of the University or of a school of the University. It will be awarded annually if a candidate of sufficient merit presents himself. A student will not be eligible for re-election, and candidates must be matriculated students or graduates of the University and must submit a statement of their qualifications and the names of three referees. Applications must be made on or before May 31st.—The University medal in Branch I. (Surgery) of the M.S. Examination for internal and external students, December, 1919, has been awarded to Edward Gustave Slesinger, B.Sc., of Guy's Hospital.—Fifteen medical entrance scholarships and exhibitions of an aggregate total value of about £1260, tenable in the Faculty of Medical Sciences of University College and King's College and in the medical schools of Westminster Hospital, King's College Hospital, University College Hospital, the London (Royal Free Hospital) School of Medicine for Women, and the London Hospital, will be offered for competition on June 29th, 1920. Full particulars may be obtained from the secretary of the Board, S. C. Ranner, M.A., Medical School, King's College Hospital, Denmark Hill, London, S.E.5.

CAPETOWN UNIVERSITY MEDICAL FACULTY.—Professor Crichton, a graduate of Dublin University, has been appointed to the Chair of Obstetrics and Gynæcology in the University of Capetown. He has studied in Dublin, Berlin, and Heidelberg, and has held the position of external maternity assistant at the Rotunda Hospital, and later that of assistant master of this hospital. He served during the war in the R.A.M.C. as surgeon in the 1st Eastern General Hospital, and with the Egyptian Expeditionary Force, and was mentioned in despatches in 1917. The institution of this chair, together with the previous appointments to the chairs of medicine and surgery, represents a further stage in the organisation of the Medical Faculty of the Capetown University, and enables the University to complete this year the necessary arrangements for a full medical undergraduate curriculum and the granting of degrees in medicine and surgery. A post-graduate course in public health will be instituted this year also, and will lead to a University Diploma in Public Health, corresponding to that granted by many British Universities and regarded as an essential qualification for medical men who are engaged in public health services.

MIDDLESEX HOSPITAL MEDICAL SCHOOL.—Emeritus Lectures will be delivered at the school on Feb. 26th by Sir Alfred Pearce Gould, and on March 5th by Sir Richard Douglas Powell. The lectures will be delivered at 5 P.M.

ROYAL LONDON OPHTHALMIC HOSPITAL.—The annual dinner of past and present students of the Royal London Ophthalmic Hospital will be held at the Criterion Restaurant, Piccadilly, on Thursday, March 11th, at 7 for 7.30 o'clock, Mr. William Lang, consulting surgeon to the hospital, presiding. Those intending to be present should communicate as soon as possible with Mr. Charles Goulden, 42, Welbeck-street, London, W.1.

NO. 19 CASUALTY CLEARING STATION.—It is proposed to hold a 19 C.C.S. dinner in London on Saturday, Feb. 28th, at the Trocadero Restaurant, Piccadilly Circus, W., at 7.30 P.M., when it is hoped that many officers of the unit will be able to be present, while members of other C.C.S.'s and all who were associated with the station are cordially invited to attend. Applications for tickets should be made as soon as possible to the Rev. E. C. Doddrell, at 6, Alexandra House, Regent's Park-road, N. 3.

WORKERS FOR SERBIA.—A dinner will be held on Monday, March 1st, at 7 for 7.30 P.M., at the Wharncliffe Rooms, Great Central Hotel, to give an opportunity for social re-union to those who have worked during the war on behalf of Serbia. The committee of the dinner, which is widely representative of those who have served abroad for the Serbians, announce that already tickets have been taken by men and women associated with most of the medical missions or with the motor transport attached to the Royal Serbian Army. They also call attention to the fact that at this Service dinner men and women are alike eligible as participants. Tickets, 15*s.* each (exclusive of wine), may be obtained from the honorary secretary, Miss Marx, 24, Melcombe-court, Dorset-square, N.W.1.

RESIDENTIAL TUBERCULOSIS TREATMENT: A CONFERENCE OF MEDICAL OFFICERS.—A conference of the medical superintendents of sanatoriums, training colonies, and other residential institutions for cases of tuberculosis has been called for Monday, Feb. 23rd, 4 P.M., at 122, Harley-street, to discuss the problems which specially concern such institutions. The invitation to this conference is signed by Dr. Esther Carling (Peppard), Mr. E. H. T. Nash (Preston Hall), Dr. A. Niven Robertson (Benenden), Mr. P. C. Varrier-Jones (Papworth Hall), Dr. Jane Walker (Nayland), Dr. James Watt (Downs, Sutton), and Dr. R. C. Wingfield (Frimley), and states that there is at present no recognised body of medical men or women to whom to turn for the advancement of the institutional treatment of tuberculosis. Many new problems are arising, and it is felt that there ought to be some means of communication and discussion between medical men and women specially interested in this work. By such means experiences can be exchanged, new ideas on treatment and administration brought forward and sifted, certain standards set up and recognised as essential in the residential treatment of tuberculosis, and greater weight given to individual recommendations which have received the approval of a body of expert opinion. Through the action of a vigorous society, an impetus can be given to the improvement of administrative and therapeutic methods. The subjects likely to come up for discussion at this conference are the appointment of a special committee to consider and report on the standards of treatment to be aimed at in institutions for tuberculosis; sanatorium nurses in relation to general training; the treatment of advanced and dying cases; and the granting of leave to patients at holiday times. Quarterly meetings are suggested.

THE Society of Apothecaries has awarded the Gillson scholarship for original research in pathology of the annual value of £105 to Dr. A. L. Urquhart, of St. Thomas's Hospital.

NATIONAL HEALTH WEEK.—The Lord Mayor, in his capacity as chairman of the National Health Week Committee, appointed by the Royal Sanitary Institute, has received letters from the King and Queen acceding to a request for Royal patronage of the 1920 celebration of Health Week, which has been arranged to take place throughout the country from May 2nd to the 8th.

HYGIENE AS A REMEDY FOR SOCIAL UNREST.—A lecture on this subject was delivered at the Institute of Hygiene on Feb. 11th by Mr. Grant Ramsay, F.R.E.S., Principal of the Institute, Sir Arthur Yapp in the chair. Mr. Ramsay said that two peaceful revolutions were prominent to-day: the labour cause, and woman's "so-called emancipation." The one affected the country's future and the other the future race, but both were going too fast. There was good reason for shorter hours at the present time, and even six hours a day was too long for certain classes of work, but with better organisation, better feeding, better housing, and change in work there was no reason why any fit man should not do 12 hours a day. That might be called intensive labour, and would require to be entered upon in courses and in the spirit of a good dinner, but it would benefit the worker himself and greatly help the country. The woman's movement was marked less by emancipation than by climbing down to the level of men, but, while the disproportion of the sexes remained, justice demanded that every vocation should be free and open to them. The primary duty was maternity. The lecturer had investigated the question of the falling birth-rate in France 30 years ago, and had concluded that the chief cause affecting maternity was the psychological influence traceable to the degree in which French women shared their husbands' worries in business as well as in the home. Excitement and gaiety also adversely affected the birth-rate. Hygiene was a very sound remedy for social unrest, as the principles of hygiene require moderation in all things, and never was moderation so necessary as now. The country was a great invalid requiring every care in convalescence, and those who were dancing mad and living riotously were simply patients in a state of delirium. Steady work and sobriety in living was the great panacea, and we could not have real peace until we settled down.

RECONSTRUCTION OF CLINICAL TEACHING: THE POSITION AT ST. BARTHOLOMEW'S HOSPITAL.—The reorganisation of clinical teaching at St. Bartholomew's Hospital is now approaching completion. As we have already announced, two professorial clinical units began their work on Oct. 1st. The director of the medical unit is Sir Archibald Garrod, the assistant director Dr. F. R. Fraser, and the chief assistants Dr. A. E. Gow and Dr. George Graham. Dr. Fraser, son of the late Sir Thomas Fraser, was educated at Cambridge and Edinburgh, and was recently consulting physician to the British Army at Cologne. He has held the posts of assistant physician to the Presbyterian Hospital, New York, instructor in clinical medicine at the Columbia University, and assistant resident physician to the Rockefeller Institute for Medical Research. He took up his duties at St. Bartholomew's on Feb. 1st, and his appointment completes the medical unit there. The surgical unit is under the direction of Mr. George E. Gask, and the post of assistant director has recently been filled by the appointment of Mr. T. P. Dunhill, surgeon to the St. Vincent's Hospital, Melbourne, who during the war acted as a consulting surgeon to the British Army in France. The chief assistants are Mr. R. Ogier Ward and Mr. G. L. Keynes. Each of these units is provided with clinical laboratories of its own for routine pathological work and research. They each take their share of the ordinary hospital duties, and are linked up so as to be in daily communication and consultation. Not only have these units been set up, in which the directors are devoting their whole time to the duties of teaching and research, but the other medical and surgical clinics have been reconstituted by the appointment to each of a chief assistant who acts as registrar to his unit, supervises the routine clinical pathology connected with it, and gives instruction to the students in this work. The pathological department has undergone reconstruction. In addition to Professor F. W. Andrewes, who is head of the department, Dr. M. H. Gordon is bacteriologist to the hospital and lecturer on bacteriology; Dr. B. H. Spilsbury supervises the post-mortem examinations and is lecturer on morbid anatomy and histology; and Dr. R. L. Mackenzie Wallis is chemical pathologist to the hospital and lecturer on chemical pathology. Three senior demonstrators have been appointed as whole-time pathologists, and, in addition, three junior demonstrators as part-time officers.

ROYAL MEDICAL BENEVOLENT FUND.—At the last meeting of the Committee, held on Feb. 10th, 17 cases were considered and £183 2s. voted to 14 of the applicants. The following is a summary of some of the cases relieved:—

Widow, aged 38, of M.D. Dub. who practised in Dublin. Applicant is a trained nurse, but is unable to work at present on account of ill-health of self and child. Pays 5s. a week rent for one room. Relieved four times, £29. Voted £10.—Widow, aged 38, of L.R.C.P. Edin. who practised at Battersea and died in 1917. Has been living on her capital, which is now entirely exhausted. Has three children, ages 12, 10, and 4, and is without means, and two of the children are ill. Has been living for some time on the sale of her furniture, as she cannot take a situation on account of the children. Rent 17s. for two rooms. Relieved once, £10. Voted £5 and a special grant of £2 2s.—Widow, aged 61, of L.S.A. Lond. who practised at Limehouse and died in 1894. Was left unprovided for with two daughters, now aged 27 and 26. The elder one earns £60 a year and the younger £40, and between them they pay their mother £60. Applicant earns £13 by needlework. Rent and rates £35. Relieved 12 times, £140. Voted £18 in 12 instalments.—Daughter, aged 58, of F.R.C.S. Eng. who practised in Bedfordshire and died in 1890. Has no income. She receives £13 from the Guild. Rent 4s. a week. Relieved 14 times, £136. Voted £18 in four instalments.—Daughter, aged 57, of M.R.C.S. Eng. who practised at Hadleigh and died in 1877. Applicant received £18 from dividends and £21 from another charity. Does a little needlework occasionally. Rent 10s. 6d. for two rooms. Relieved four times, £38. Voted £18 in 12 instalments.—Daughter, aged 73, of L.S.A. Lond. who practised at Christchurch and died in 1880. Only certain income £47 from dividends. Applicant is an artist and occasionally sells a picture. Pays £3 per week for board and lodging. Relieved four times, £63. Voted £9 in six instalments.—Daughter, aged 61, of M.D. Lond. who practised in North London and died in 1868. Acts as housekeeper or does a little nursing when her health permits. Receives £26 from another charity and £12 from friends. Rent 10s. a week for one room. Relieved six times, £36. Voted £12 in 12 instalments, and a special grant of £2.—Daughter, aged 61, of M.R.C.S. Eng. who practised at Sheffield and died in 1867. At present she has a temporary post as a clerk at £65 a year, but this may cease at any time. Only other income £30 from another charity. Cannot manage owing to the high cost of living. Board and lodging 26s. a week. Relieved twice, £24. Voted £12 in 12 instalments.—Widow, aged 70, of M.R.C.S. Eng. who practised in East London and died in 1906. Was left unprovided for with six children; four of them are now married and are unable to help. Eldest daughter is a teacher and pays the rates and taxes, £22; the other daughter helps at home. Applicant takes in boarders. Rent £38. Relieved by the Fund many years ago and again in 1913, when she was granted £12. Voted £10.

Subscriptions may be sent to the honorary treasurer, Sir Charters J. Symonds, C.B., F.R.C.S., at 11, Chandos-street, Cavendish-square, London, W. 1.

ROYAL VICTORIA HOSPITAL, EDINBURGH: TUBERCULOSIS TRUST.—At the annual general meeting Mr. Charles Cook, W.S., the chairman, said that there had been a growing feeling on the part of those best entitled to speak that treatment hitherto had been directed too exclusively to the pulmonary forms of tuberculosis. It must be kept in mind that tuberculosis of the lungs was frequently a late manifestation, which might have been checked more readily had it been taken at an earlier stage. Many other parts of the body besides the lungs were prone to the attacks of tuberculosis. The modern view was that for the most part tuberculosis was contracted in childhood, and that if detected and treated early its disastrous effects in adult life would be much reduced. They had come to the conclusion that in the future they should have regard to two aspects of the subject (1) the treatment of tuberculosis in whatever organ it occurred at any age, and (2) the investigation and development of lines of treatment for all particular forms of the disease. They had decided to establish a farm colony on national lines which would be available for the prolonged care and treatment of all forms of tuberculosis in the curable stage. Preference was to be given to soldiers, sailors, and others who had contracted the disease or had it aggravated by war service, and such preference was also to be extended to their families. Thereafter admission would be given to suitable cases from all parts of Scotland. It was hoped to combine the benefits of a sanatorium and training school. With this object, and with the coöperation of the National Association for the Prevention of Tuberculosis, they had acquired the beautifully situated estate of Southfield, in the parish of Liberton, at a cost of £9400. The grounds extended to about 33 acres, and the existing house and offices would provide accommodation for approximately 40 patients.—Sir Robert Philip outlined briefly the history of the movement for the prevention of tuberculosis, and alluded to the wise policy which had led to the establishment of the farm colony, and to the good results which should be obtained therefrom. Sir Arthur Stanley, in moving the adoption of the report, after referring to the Government campaign against tuberculosis and the part which could be played by voluntary helpers, expressed the hope that by means of the international league at Geneva, established under the auspices of the Red Cross, every country of the world could obtain full information as to how disease was being treated in other countries.

THE INDUSTRIAL ORTHOPÆDIC SOCIETY.—The following appointments have been made on the honorary visiting staff of Manor House Hospital, Hampstead: Mr. Russell J. Howard, M.S., F.R.C.S. (senior surgeon), and Mr. C. Jennings Marshall, M.D., M.S., F.R.C.S.

ST. MARK'S HOSPITAL.—The Lord Mayor of London, presiding at the eighty-fourth annual meeting of St. Mark's Hospital for Cancer, Fistula, and other Diseases of the Rectum, City-road, in moving the adoption of the report, drew attention to the fact that £2300 are owing to the bankers, and appealed for help to wipe out that debt and to meet ordinary expenditure. During the year the hospital treated 1509 out-patients and 655 in-patients. The fact that the latter number was lower in 1919 than in 1918 was explained by the increase in serious cancer cases requiring long treatment.

PRESTON HALL COLONY.—At this Kentish tuberculosis colony, which is being run by the Industrial Settlements, Ltd., it is expected that 43 places will be available next month. The charge is to be 45*s.* a week, and each applicant must undertake to stay for a period not less than six months. Patients are admitted either directly from a sanatorium or upon the certificate of a tuberculosis officer. Only those without tubercle bacilli in their sputum are admitted.

DIPHTHERIA IN CORNWALL.—At the last meeting of the Phillack (Cornwall) urban district the medical officer of health reported that during the past month three deaths had occurred from diphtheria. There had been 19 cases of diphtheria and 4 of scarlet fever. The medical officer of health considered this a very grave state of affairs, and expressed regret that after all the expense of providing welfare nurses, &c., children should be lost through the want of proper isolation accommodation.

MANCHESTER PATHOLOGICAL SOCIETY.—Sir Walter Fletcher, secretary of the Medical Research Committee, will give an address in the Medical School of Manchester University on Tuesday, Feb. 24th, at 5 P.M., on "Medical Research after the War," to which medical practitioners and students are invited.

LIVERPOOL OVERSEAS MEDICAL OFFICERS' DINNER.—Under the chairmanship of Major-General Sir Robert Jones, K.B.E., C.B., the second annual dinner of the local overseas medical officers was held in the Exchange Hotel, Liverpool, on Feb. 13th. About one hundred were present. The toast list was a short one, and the speeches were characterised by a soldierly briefness. There was no musical programme, those present finding sufficient entertainment in reminiscences of the great days through which they had lived in every corner of the zone of war. Altogether a most enjoyable evening was spent. The back of the menu was adorned with a design by Colonel John Hay, in which, out of compliment to the chairman, Thomas's splint was a special feature.

MOBILE LABORATORY FOR THE WELSH NATIONAL SCHOOL OF MEDICINE.—The mobile laboratory originally presented to the War Office by Lady Lynn Thomas for work with the Welsh Forces in France, where it was manned by Professor E. Emrys-Roberts, has, through the timely action of these two persons, been presented by the War Office to the Welsh National School of Medicine. It is to be taken charge of by the City of Cardiff and County of Glamorgan Joint Laboratory Committee for use in public health service.

NEW HOSPITAL FOR YEOVIL.—At the recently held annual meeting of the friends of the Yeovil Hospital it was stated that plans for a new hospital had been received, and the work would shortly be commenced. The cost of the building is estimated at £50,000, exclusive of the fitting up of the institution. The committee has about £11,000 in hand, and a strong effort is to be made to obtain the necessary funds.

SHEFFIELD CORPORATION AND PARENTAL NEGLECT.—In a test case bearing on the meaning of "neglect" in the care of mental defectives recently argued in Sheffield the corporation failed to establish their claim, and judgment was given against them. A youth of 20 had been certified as mentally defective and sent to an institution. His parents, unsuccessful in their initial claim for his release, based on their dissatisfaction with his training, appealed to the law. The corporation's case depended on the interpretation of the meaning of the word neglect, as by the Mental Defectives Act of 1913 neglect is one of the reasons for which a mental defective may be placed in an institution. The court granted the parents' application. Mr. Justice Greer ruling that there was nothing in the home circumstances to justify the supposition of neglect. The case is exciting some interest, as the decision is regarded in legal circles in Sheffield as a proof that elucidation of the Act is desirable.

HONOUR FOR PROFESSOR TUFFIER.—His Majesty the King has been pleased to approve the appointment of Professor Tuffier to be an Honorary Knight Commander of the Order of the British Empire, and the appropriate insignia have been forwarded to His Majesty's Ambassador at Paris for presentation. This recognition of Professor Tuffier's services to the wounded British officers and men brought into Paris during the early phases of the war, and of his kindly and untiring efforts to make the Inter-Allied Surgical Conferences a success, will be regarded with general satisfaction by all those who enjoyed the pleasure and privilege of working in association with him. It is significant that this is an honour awarded to a temporary consulting surgeon in the civilian medical branch of a foreign nation.

CINEMA FOR HOSPITAL PATIENTS.—Through the kindness and generosity of a Brighton resident the patients of the Royal Sussex County Hospital have been given a cinematograph entertainment, which was much appreciated.

DEVON EDUCATION COMMITTEE: THE TEETH OF SCHOOL CHILDREN.—The school medical officer for the Devon Education Committee reports that in the Exeter district 693 parents (21 per cent.) refused to allow their children to be treated by the school dentist; in Plymouth 718 parents (39 per cent.) refused the treatment. Some of the members of the Committee regarded this state of things as a perfect scandal, and thought the treatment should have been made compulsory by Act of Parliament.

BRISTOL MEDICAL DRAMATIC SOCIETY.—After a lapse of six years this society has renewed its annual performance, the play chosen being *The Younger Generation*, by Stanley Houghton. The caste, which has hitherto included members of the teaching staff and a few friends not connected with the Medical School, was for the first time composed entirely of medical students, men and women. This new departure was justified by results and achieved general satisfaction. The performance was the thirty-seventh which has been given by the society.

Parliamentary Intelligence.

HOUSE OF COMMONS.

WEDNESDAY, FEB. 11TH.

Honours for Army Nurses.

Brigadier-General CROFT asked the Secretary for War whether his attention had been called to the fact that a great many trained nurses, who served as nursing sisters on active service continuously from August, 1914, onwards, had now been released from service without any official expression of gratitude for their services; whether he was aware that several cases of nurses who were recommended in the strongest terms by their commanding officers for the Royal Red Cross, First Class, in recognition of exceptional services in the actual war zone, had been passed over, whilst nurses, in many cases untrained and who never left home duty, had received this honour; and whether, in view of these facts, he would cause inquiry to be made with a view to securing justice to those who had been strongly recommended for this honour.—Mr. CHURCHILL replied: All trained nurses who served under the War Office as nursing sisters on active service have on being demobilised received an official letter conveying thanks for their services. Recommendations for the award of the Royal Red Cross, whether at home or abroad, are in all cases made by the general officer commanding under whom the person recommended has served, and so far as I am aware there have been no cases in which nurses serving abroad, who have been so recommended, have not been given the decoration.

THURSDAY, FEB. 12TH.

Vaccination Acts Amendment.

Mr. CHARLES EDWARDS asked the Minister of Health whether he would consider amending the Vaccination Acts of 1862-98 and 1907, so that compulsory vaccination and penalties for non-compliance would be repealed, and that it should be left to the parent or person having the custody of the child to determine whether or not the child should be vaccinated, without having to make a declaration before a justice of the peace.—Dr. ADDISON replied: No, Sir; the dangers to the health of the community that would be involved in the adoption of the honourable Member's suggestion are too great to admit of it being considered.

Gratuity for Army Masseuses.

Major HURST asked the Secretary for War whether masseuses of the military massage service were entitled to receive gratuities on the termination of war service; and, if not, why there should be any differentiation between them and other nursing sisters.—Sir A. WILLIAMSON replied:

War gratuities, broadly speaking, are given to commissioned officers and enlisted soldiers and are not given to the very large number of civilians, men and women, who in various ways worked for the army during the war. An exception to this rule was made in the case of Queen Alexandra's Imperial Military Nursing Service and other staff performing similar duties, for special reasons and in accordance with precedent; but after very full consideration I am not prepared to extend this exception.

Pensions Medical Referees.

Mr. DOYLE asked the Minister of Pensions whether, in regard to War Pensions Committees, medical men could be paid for services rendered in connexion with appeal cases.—Sir L. WORTHINGTON-EVANS replied: Under the new procedure detailed in Circular 201, which was addressed to local War Pensions Committees on Dec. 23rd, the services of medical referees are no longer required in connexion with the forwarding of appeals to the Pensions Appeal Tribunals. The question of payment therefore does not now arise.

MONDAY, FEB. 16TH.

Extra Grant to Workmen's Medical Associations.

Mr. T. GRIFFITHS asked the Minister of Health if he would state why the extra grant made to medical men and chemists to meet the increased price of drugs and cost of living had not been paid out to medical men engaged by workmen's medical associations.—Dr. ADDISON (Minister of Health) replied: If the honourable Member is referring to institutions recognised under Section 15 of the Insurance Act I must refer him to the answer given on Oct. 29th to the honourable Member for West Nottingham. The Friendly Societies Medical Alliance has still failed to send in the requisite information as regards institutions in England. Information has recently come in from certain institutions in Wales, and this is under consideration with a view to determining such grants as may be due.

Dogs' Protection Bill.

Sir F. BANBURY presented a Bill "to prohibit the vivisection of dogs," which was supported by Sir J. BUTCHER and Mr. FREDERICK GREEN. The Bill was read a first time.

TUESDAY, FEB. 17TH.

Mental Cases in Military Hospitals.

Lieutenant-Colonel GUINNESS asked the Secretary for War whether, in view of the great anxiety felt by the relations of missing men owing to reports that military hospitals contained cases of such severe mental trouble that identity could not be established, he would arrange to publish photographs of all such patients in the press or otherwise, and would also collect all these cases in one hospital where they could be seen by the relatives who still had hopes of tracing men who had been reported missing.—Sir A. WILLIAMSON (Financial Secretary to the War Office) replied: There is now only one soldier of the Imperial Forces who is unidentified owing to mental trouble.

Army Medical History Sheets.

Colonel ASHLEY asked the Secretary for War whether he would consider the question of furnishing each man on discharge or demobilisation with a copy of his army medical history sheet, as the possession of this evidence would very materially assist men in establishing their statutory right to a pension.—Sir A. WILLIAMSON: Army medical history sheets are confidential, and it would be contrary to the practice of the War Office to furnish copies of them to the men concerned or to other individuals. Apart from this, the course suggested by the honourable and gallant Member would involve a great amount of additional clerical work and appears to be quite unnecessary. The medical history sheets of all soldiers invalided from the army are sent to the Ministry of Pensions, and in cases where men discharged in the ordinary way subsequently claim a disability pension their medical history sheets and other documents are always obtained by the Ministry of Pensions from the Record Office.

Rehearing of Pensions Appeals.

Colonel ASHLEY asked the Pensions Minister whether, in view of the fact that a statutory right to pension had now been conceded and new tribunals unconnected with the Ministry of Pensions were being set up to deal with claims, an opportunity would be given for the rehearing of appeals disallowed by the appeal tribunals under the jurisdiction of the Ministry, as in many cases great hardship had resulted from the decision of the tribunal in question.—Sir J. CRAIG (Parliamentary Secretary to the Ministry of Pensions) replied: The class of case to which my honourable and gallant friend refers is specifically excluded from the right of further appeal by the War Pensions (Administrative Provisions) Act, 1919, and the reasons for its exclusion were explained in the debate which preceded the passing of the Act. The appeal tribunals set up under the Ministry were not subjected to any interference by this Department and only differed from the present tribunals in that their decisions were not legally binding on the Minister, although almost invariably accepted by him.

Appointments

Successful applicants for vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

ANDREWS, J. A., has been appointed Medical Officer for the Bovey Tracey district by the Newton Abbot Board of Guardians.

FORSYTH, J. A. CAIRNS, M.Sc., F.R.C.S., Surgeon to Out-patients, Royal Waterloo Hospital for Children and Women.

LUCE, Sir R., K.C.M.G., C.B., to be one of the Medical Referees under the Workmen's Compensation Act, 1906, for County Court Circuit No. 19.

MALLAM, W. A., M.R.C.S., L.R.C.P. Lond., Medical Director of the International Hospital, Naples, Italy.

TAPPER, K., Assistant Medical Officer for the County of Dorset.

WOOD, W. V., M.R.C.S., L.R.C.P., Medical Officer for the Yatton (Somerset) District.

WOODFORDE, A. W. G., M.B., B.S. Lond., Honorary Registrar to the Samaritan Hospital for Women, Liverpool.

Great Northern Central Hospital: GRAHAM, G., M.D., M.R.C.P. Lond., and ADEY, W. J., Physicians with charge of Out-patients; SOUTER, M. J. K., L.D.S. R.C.S., Assistant to the Dental Surgeon.

St. Thomas's Hospital: CARDELL, J. D. M., M.R.C.S., L.R.C.P. Lond., POTTER, A. F., M.R.C.S., L.R.C.P., STORMER, H. G., M.R.C.S., L.R.C.P., BILLINGTON, C. M., M.R.C.S., L.R.C.P., COOKE, R. C., M.R.C.S., L.R.C.P., HALE, J., M.R.C.S., L.R.C.P., SPENCE, D. B., M.R.C.S., L.R.C.P., WOOD, F. G., M.R.C.S., L.R.C.P., Casualty Officers and Resident Anæsthetists; DAWSON, W. S., M.A., M.B., B.Ch. Oxon, M.R.C.S., L.R.C.P., WHITCOMBE, R. C. P., B.A. Cantab., M.R.C.S., L.R.C.P., WARE, S. A. T., M.R.C.S., L.R.C.P., PROCTER, R. A. W., M.R.C.S., L.R.C.P., Resident House Physicians; SMITH, J. FOREST, M.R.C.S., L.R.C.P., Resident House Physician for Children; ROBINSON, R. H. O. B., M.B., B.C. Cantab., M.R.C.S., L.R.C.P., WAYTE, J. W., M.B., B.S. Lond., M.R.C.S., L.R.C.P., PERKINS, G., M.B., B.Ch. Oxon., M.R.C.S., L.R.C.P., HUMPHREYS, R. M., M.B., B.Ch. Oxon., Resident House Surgeons; MARINER, H. I., M.R.C.S., L.R.C.P., Resident House Surgeon for Ear, Nose, and Throat; HIGGINS, L. G., M.R.C.S., L.R.C.P., House Surgeon; RICHARDSON, A. H., M.B., B.C. Cantab., F.R.C.S. Eng., GARSON, H. L., M.R.C.S., L.R.C.P., Obstetric House Physicians; WALKER, J. P. S., M.B., B.Ch. Oxon., BROCKMAN, E. P., M.R.C.S., L.R.C.P., Ophthalmic House Surgeons; CAVENAGH, J. B., M.B., B.Ch. Oxon., M.R.C.S., L.R.C.P., DOORLY, A. R. C., M.B., B.S. Lond., M.R.C.S., L.R.C.P., Clinical Assistants to Throat Department; GARDINER-HILL, H., M.B. Cantab., M.R.C.S., L.R.C.P., HALLIWELL, A. C., M.R.C.S., L.R.C.P., Clinical Assistants to the Skin Department; BRETT, P. C., M.R.C.S., L.R.C.P., SPROTT, N. A., B.A., M.B., B.Ch. Oxon., M.R.C.S., L.R.C.P., Clinical Assistants to the Ear Department; SPEAR, F. G., M.R.C.S., L.R.C.P., Clinical Assistant to the Electrical and X Ray Department.

Certifying Surgeons under the Factory and Workshop Acts: FFOULKES, M., M.R.C.S., L.R.C.P. Lond. (Abergele); WILLIAMS, O. E., M.R.C.S., L.R.C.P. Lond. (Mold); RICHARDS, W. G., M.B., Ch.B. Edin. (Llansawel).

Vacancies.

For further information refer to the advertisement columns.

Argyll and Bute District Asylum, Lochgilphead, Argyllshire.—Asst. M.O. £250.

Ashton-under-Lyne District Infirmary.—Third H.S. £150.

Aylesbury, Royal Buckinghamshire Hospital.—H.S. £200.

Bedford County Hospital.—H.P. £150.

Birkenhead Borough Hospital.—Two H.S.'s. £200 and £170.

Birmingham City Mental Hospital, Rubery Hill, near Birmingham.—Second Asst. M.O. £400.

Brighton, Hove, and Preston Dispensary.—Res. M.O. £200.

Brighton, Royal Sussex County Hospital.—Asst. Path. £300.

Burton-on-Trent Infirmary.—H.S. £200.

Cambridgeshire Mental Hospital, Fulbourn, near Cambridge.—Asst. M.O. £400.

Cancer Hospital (Free), Fulham-road, S.W.—Asst. Anæsth. 25 g.

Chartham, near Canterbury, Kent County Mental Hospital.—Jun. Asst. Third M.O. £300.

Chorley Borough.—M.O.H. and School M.O. £700.

Coventry Education Committee.—Sch. Dent. £400.

Croydon County Borough Mental Hospital, Upper Warlingham, Surrey.—Second Asst. M.O. £500.

Derby, Derbyshire Royal Infirmary.—Ophth. H.S. £200.

Devonport, Royal Albert Hospital.—H.S. £200.

Dorchester, Dorset County Council Education Committee.—School Dentists. £400.

Dover, Royal Victoria Hospital.—H.S. £180.

Dudley County Borough.—Asst. Sch. M.O. and M.O.H. £500.

Elizabeth Garrett Anderson Hospital, 144, Euston-road, N.W.—Jun. Asst. S.

Essex County Council and Clacton Urban District Council.—Asst. County M.O.H. and M.O.H. £600.

Gloucester County Borough Education Committee.—School Dent. £450.

Gloucester, Gloucestershire Royal Infirmary and Eye Institution.—H.P and Asst. H.S. £175 and £150 each.

Govan District Asylum, Hawkhead, Cardonald, Glasgow.—Jun. Asst. M.O. £300.

Great Northern Central Hospital, Holloway, London, N.—P Asst. 300 gs. S.

Great Yarmouth General Hospital.—H.S. £200.

Hampshire County Council.—Asst. M.O.H. £540.

Huddersfield, Bradley Wood Sanatorium for Pulmonary and Surgical Tuberculosis.—Res. M.O. £500.
Ipswich, East Suffolk and Ipswich Hospital.—Bact. and Path.
Lancashire County Council, School Medical and Child Welfare Department.—Two Asst. County M.O.'s. £800.
Lancaster County Asylum.—Asst. M.O. £300.
Lindsey County Council.—Asst. Tuberc. O. and Asst. Sch. M.O. £550.
Liverpool, David Lewis Northern Hospital.—Two H.P.'s and Three H.S.'s. £150.
Liverpool Infirmary for Children.—H.S. and H.P. £90.
Liverpool, Royal Southern Hospital.—Hon. Ophthal. S. Also Hon. Asst. P.
London County Council Mental Hospitals Service.—Fifth Asst. M.O.'s. £300.
London (Royal Free Hospital) School of Medicine for Women.—Two Part-time Demonstrators in Anatomy.
London Temperance Hospital, Hampstead-road, N.W.—Medical Registrar. 40 guineas.
Macclesfield, Cheshire County Asylum, Parkside.—Asst. M.O. £350.
Maidenhead, Bray Court, Home for Neurasthenic Sailors and Soldiers.—Res. M.O. £500.
Manchester Children's Hospital, Pendlebury, near Manchester.—Res. M.O. £150.
Manchester City Education Committee.—Asst. Sch. M.O. £600.
Manchester Royal Infirmary.—H.P.'s.
Manchester, St. Mary's Hospitals for Women and Children.—Asst. M.O. £75.
Margate, Royal Sea-Bathing Hospital for Surgical Tuberculosis.—Res. S. £200.
Miller General Hospital for South-East London, Greenwich, S.E.—H.P. and Registrar. £100.
Newark-on-Trent, Newark Hospital and Dispensary.—Res. H.S.
Newcastle-upon-Tyne, Hospital for Sick Children.—Hon. Asst. S.
Newcastle-upon-Tyne, Royal Victoria Infirmary.—Temp. Surg. Registrars and H.S. Also Two Temp. Hon. S. and Two Temp. Hon. Asst. S.
Northumberland County Council.—County M.O.H. and Sch. M.O. £800.
Norwich City.—Asst. Sch. M.O. £500.
Norwich, Norfolk and Norwich Hospital.—H.S. £200.
Nottingham General Hospital.—Hon. M.O. for X Ray and Electro-Therapeutic Dept. Also H.P. £150.
Notts County Council.—Asst. Tuberc. O. and Asst. Sch. M.O. £500.
Queen's Hospital for Children, Hackney-road, Bethnal Green, E.—Asst. S.
Roll of Honour Hospital for Children, 688, Harrow-road, W.—Clinical Asst.
Rousay and Egilshay, Orkney.—Res. M.O. £300.
Royal College of Surgeons in Ireland.—Lectureship. £150.
St. Bartholomew's Hospital and College.—Sen. Demonstr. of Physiology. £400. Demonstr. of Pathology.
Salford Royal Hospital.—Res. S.O. £250. H.P. £200. H.S., Jun. H.S., and Cas. H.S., £150 each.
Seamen's Hospital Society, Dreadnought Hospital, Greenwich.—P. 50 gs. Three Anæsth.'s. 50 gs. H.S. £100.
Sheffield Children's Hospital.—H.S. £200.
Sheffield, East End Branch of the Children's Hospital.—H.S. £150.
Sheffield Royal Hospital.—Asst. Cas. O. £150.
Shirlett, near Much Wenlock, King Edward VII. Memorial Sanatorium.—Res. Med. Supt. £450.
Southampton, Royal South Hants and Southampton Hospital.—Sen. H.S. £250. H.P. £150.
South London Hospital for Women, South Side, Clapham, S.W.—Asst. Pathologist.
Stamford, Rutland, and General Infirmary.—H.S. £200.
Stoke-on-Trent.—Female M.O. £500.
Sunderland, Royal Infirmary, Children's Hospital.—Res. M.O. £200.
Swindon Borough.—Asst. M.O.H. £600.
Throat Hospital, Golden-square, W.—Surgical Registrar.
Turks and Caicos Islands.—M.O. £400.
Wakefield, Clayton Hospital.—Jun. H.S. £150.
Wakefield, West Riding County Council.—Sch. Med. Inspector. £500.
Westminster Hospital, Broad Sanctuary, S.W.—H.P.
Wigan County Borough Education Committee.—Part-time School Dentist. £150.
Wigan Infirmary.—Jun. H.S. £225.

THE Chief Inspector of Factories, Home Office, S.W., gives notice of vacancies for Certifying Surgeons under the Factory and Workshop Acts at Hungerford and at North Walsham.

Births, Marriages, and Deaths.

BIRTHS.

BLACKSTOCK.—On Feb. 11th, at The Elms, Eskbank, Midlothian, to Dr. and Mrs. Hall Blackstock—a daughter.

MARRIAGES.

DUNNE—HENDERSON.—On Feb. 11th, at the Parish Church, Holy Trinity, Brompton, Major J. S. Dunne, D.S.O., R.A.M.C., to Catharine Henderson, M.B.E., only child of Admiral and Mrs. Henderson.

KEITH—MACKEY.—On Feb. 11th, at St. Faith's, Maidstone, William Brooks Keith, M.C., M.D., to Dora, elder daughter of Mr. and Mrs. W. J. Mackey, of The Highlands, Maidstone.

DEATHS.

DICKSON.—On Feb. 11th, at Blackheath, Captain Alexander Collingwood Dickson, R.A.M.C. (retired), aged 42 years.

MURPHY.—On Feb. 13th, at Military Hospital, Chisledon, of heart failure, Francis Murphy, temporary Captain, R.A.M.C.

PRIOR.—On the 4th Feb., at Watford, Mrs. Alice Percival Prior, widow of Richard Henry Prior, M.D., J.P., formerly of St. Albans, Herts, aged 71 years.

N.B.—A fee of 7s. 6d. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary.

SOCIETIES.

ROYAL SOCIETY, Burlington House, London, W.

THURSDAY, Feb. 26th.—Papers:—Mr. L. F. Richardson: Some Measurements of Atmospheric Turbulence (communicated by Sir Napier Shaw).—Mr. W. G. Duffield, Mr. T. H. Burnham, and Mr. A. A. Davis: The Pressure upon the Poles of Metallic Arcs, including Alloys and Composite Arcs (communicated by Prof. O. W. Richardson).—Mr. J. H. Hyde: On the Viscosities and Compressibilities of Liquids at High Pressure (communicated by Prof. J. E. Petavel).—Mr. A. Russell: The Capacity Coefficients of Spherical Conductors (communicated by Dr. C. Chree).—Mr. C. Cuthbertson and Maude Cuthbertson: On the Refraction and Dispersion of Carbon Dioxide, Carbon Monoxide, and Methane.—Mr. A. A. Griffith: The Phenomena of Rupture and Flow in Solids (communicated by Mr. G. I. Taylor).

ROYAL SOCIETY OF MEDICINE 1, Wimpole-street, W.

Tuesday, Feb. 24th.

SOCIAL EVENING: at 8.30 P.M.

Mr. C. Edward Wallis will show Some Objects of Great Historical Dental Interest, kindly lent by the Wellcome Medical Museum and Mr. Joseph Ash. Mr. Wallis will also give a twenty minutes' talk on "The History of Artificial Teeth, including the Gold Bridge Work of the Ancient Etruscans." The Library will be open, and various objects of interest will be exhibited. Music and light refreshments. It is hoped there will be a good attendance of Fellows and their friends, who will be cordially welcomed.

MEETINGS OF SECTIONS.

Monday, Feb. 23rd.

ODONTOLOGY (Hon. Secretaries—G. Paton Pollitt, W. Kelsey Fry J. Howard Mummery): at 8 P.M.

Clinical Evening. Cases (at 7.45 P.M.).

Tuesday, Feb. 24th.

MEDICINE (Hon. Secretaries—W. Cecil Bosanquet, J. H. Thursfield): at 5.30 P.M.

Colonel Ransom Pickard and Dr. G. W. Lloyd: Early Manifestations of Scurvy.
Dr. S. Dutton: Some Deficiency Diseases and Leprosy.

Thursday, Feb. 26th.

ELECTRO-THERAPEUTICS WITH THE RONTGEN SOCIETY AND THE INSTITUTION OF ELECTRICAL ENGINEERS (Hon. Secretaries of the Section—Walter J. Turrell, Stanley Melville): from 5 to 6.45 P.M.

Dr. Reginald Morton: Efficiency of High Tension Transformers.
Major C. E. S. Phillips, O.B.E.: The Problems of Fluctuating and Alternating Currents.
Mr. R. S. Wright, M.I.E.E.: High Tension Transformers.

Discussion, Exhibition of Apparatus: from 8.15 to 10 P.M.

Friday, Feb. 27th.

STUDY OF DISEASE IN CHILDREN (Hon. Secretaries—E. A. Cockayne, H. C. Cameron, C. P. Lapage): at 4.30 P.M.

Discussion:
On "The Influence of Accessory Food Factors in Infant Feeding." To be opened by Dr. Mellanby. Professor Noel Paton, Dr. C. J. Martin, Dr. E. A. Barton, Dr. Robert Hutchison, and Dr. E. Cautley will also take part.

Members who wish to take part in the Discussion are asked to send in their names to Dr. Cameron, 23, Devonshire Place, W. Members of other Sections are cordially invited.

EPIDEMIOLOGY AND STATE MEDICINE (Hon. Secretaries—William Butler, M. Greenwood): at 8.30 P.M.

Dr. Matthew Young: An Investigation into the Periodicity of Epidemics of Whooping-cough from 1870 to 1910 by Means of the Periodogram.

Those Members of the Section who wish to attend the dinner at the Welbeck Palace Hotel, at 7 P.M., are requested to notify Dr. Major Greenwood, Lister Institute, Chelsea Gardens, S.W.1, not later than Feb. 25th.

MEDICAL SOCIETY OF LONDON, 11, Chandos-street, Cavendish-square, W.

MONDAY, Feb. 23rd.—8.30 P.M., Sir Charters Symonds, K.B.E., C.B.: The Surgical Treatment of the Later Stages of Gunshot Injuries of the Chest and of Empyema (illustrated by the epidiascope).—Dr. P. M. Smith: The After-results of Certain Surgical Operations.

ILLUMINATING ENGINEERING SOCIETY, at the Royal Society of Arts, 18, John-street, Adelphi, W.C.

TUESDAY, Feb. 24th.—8 P.M., Discussion on Lighting Conditions in Mines, with Special Reference to the Eyesight of Miners. Dr. T. L. Llewellyn and others will take part in the discussion.

BRITISH PSYCHOLOGICAL SOCIETY (INDUSTRIAL SECTION), at the Examination Rooms of the Royal College of Physicians, 8–11, Queen-square, Bloomsbury, W.C.

WEDNESDAY, Feb. 25th.—6 P.M., Dr. H. M. Vernon: The Effect of Change in Hours of Work on Output.

HUNTERIAN SOCIETY, in the Hall of the Society of Apothecaries, Water-lane, Ludgate Hill, E.C.

WEDNESDAY, Feb. 25th.—9 P.M., Presidential Address:—Dr. W. Langdon Brown: Hunter, Gaskell, and the Evolution of the Nervous System.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East.

THURSDAY, Feb. 26th.—5 P.M., Milroy Lectures:—Dr. A. Castellani, C.M.G.: The Higher Fungi in Relation to Human Pathology. (Lecture I.)

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C.

MONDAY, Feb. 23rd.—5 P.M., Arris and Gale Lectures:—Prof. G. E. Smith: The Evolution of the Cerebellum. II., The Mammalian Cerebellum.

UNIVERSITY OF LONDON.

Advanced Lectures in Physiology to Students of the University and others interested in the subject.

A Course of Eight Lectures on Physiologically Balanced Solutions will be given by Dr. W. L. Symes in the Physiological Laboratory of the University, South Kensington, S.W.:—

TUESDAY, Feb. 24th.—5 P.M., Lecture V.

A Course of Eight Lectures on the Reaction of the Blood and Acidosis will be given by Dr. J. W. Trevan, at St. Bartholomew's Hospital, West Smithfield, E.C.:—

WEDNESDAY, Feb. 25th.—4.30 P.M., Lecture V.

A Course of Eight Lectures on the Regulation of Respiration will be given by Dr. M. S. Pembrey and Mr. J. H. Ryffel at Guy's Hospital, Borough, S.E.:—

THURSDAY, Feb. 26th.—4.30 P.M., Lecture VIII.

LONDON HOSPITAL MEDICAL COLLEGE (UNIVERSITY OF LONDON), Mile End, E.

A Course of Instruction on the Diseases of Children, open to Post-Graduates and to Students of the Hospital. (The lectures will be illustrated by lantern slides.)

MONDAY, Feb. 23rd.—9.15 A.M., Lecture VII.:—Dr. Thompson: Organic and Functional Nervous Diseases, Meningitis and Mental Deficiency. (At the Anatomical Theatre.)

WEDNESDAY.—10 A.M., Clinical Demonstration:—Dr. Miller. (At the Children's Out-patient Department.)

SATURDAY.—10.15 A.M., Lecture VIII., Dr. Hutchison: General Diseases. (At the Anatomical Theatre.)

KING'S COLLEGE HOSPITAL MEDICAL SCHOOL (UNIVERSITY OF LONDON).

A Post-Graduate Course of Lectures on Syphilis is being given by various members of the staff of King's College Hospital during the present year.

FRIDAY, Feb. 27th.—9.15 P.M., Prof. Sir StClair Thomson: Syphilis of the Throat, Larynx, &c.

NATIONAL HOSPITAL FOR DISEASES OF THE HEART POST-GRADUATE COURSE, Westmoreland-street, W.

MONDAY, Feb. 23rd.—11 A.M., Out-patients: Dr. Goodall. 2 P.M., In-patients: Dr. Moon.

TUESDAY.—2 P.M., Out-patients: Dr. R. Wells. 3 P.M., In-patients: Dr. Gibbes.

WEDNESDAY.—2 P.M., Out-patients: Dr. Moon. 5.30 P.M., Lecture:—Dr. Hamill: Heart Failure.

THURSDAY.—10 A.M., In-patients: Dr. Hamill: 2 P.M., Out-patients: Dr. Price.

FRIDAY.—2 P.M., Out-patients: Dr. Gibbes. 2.30 P.M., In-patients: Dr. Wells.

SATURDAY.—10.30 A.M., In-patients: Dr. Hamill.

ROYAL INSTITUTE OF PUBLIC HEALTH, in the Lecture Hall of the Institute, 37, Russell-square, W.C.

Special Course of Lectures and Demonstrations on Tuberculosis for Medical Men and Women qualifying to become Tuberculosis Officers, General Practitioners, and others. Bacteriological Demonstrations will be given in the Laboratories of the Institute, and visits arranged to Sanatoriums, Tuberculosis Dispensaries, &c.

THURSDAY, Feb. 26th.—5 P.M., Lecture VII.:—Dr. W. E. C. Dickson: Some Pathological Aspects of Tuberculosis.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

TUESDAY, Feb. 24th.—2 P.M., Demonstration:—Dr. R. M. Murray: Cases of Pneumonia. 4.30 P.M., Lecture:—Dr. R. M. Murray: The Complications of Pneumonia.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, W.C. 1.

MEDICAL SCHOOL.

MONDAY, Feb. 23rd.—2–3.30 P.M., Out-patient Clinic: Dr. Collier. 3.30 P.M., Mr. Paton: Ophthalmoplegia.

TUESDAY, Feb. 24th.—2–3.30 P.M., Out-patient Clinic: Dr. Grainger Stewart. 3.30 P.M., Ward Cases: Dr. Risien Russell.

WEDNESDAY, Feb. 25th.—2 P.M., Mr. Sargent: Surgical Treatment of Spinal Caries. 3.30 P.M., Dr. James Taylor: Epilepsy.

THURSDAY, Feb. 26th.—2–3.30 P.M., Out-patient Clinic: Dr. Farquhar Buzzard. 3.30 P.M., Dr. Farquhar Buzzard: Intracranial Tumours. II.

FRIDAY, Feb. 27th.—2–3.30 P.M., Out-patient Clinic: Dr. Gordon Holmes. 3.30 P.M., Ward Cases: Dr. Tooth.

SATURDAY, Feb. 28th.—9 A.M., Surgical Operations.

Fee for Post-Graduate Course £7 7s. C. M. HINDS HOWELL, Dean.

WEST LONDON POST-GRADUATE COLLEGE, West London Hospital, Hammersmith, W.

SATURDAY, Feb. 21st.—10 A.M, Dr. A. Saunders: Medical Diseases of Children.

MONDAY, Feb. 23rd.—5 P.M., Dr. Beddard: Practical Medicine. (Lecture III.)

TUESDAY.—5 P.M., Mr. Page: Spinal Anæsthesia.

WEDNESDAY.—5 P.M., Mr. Steadman: Dental Sepsis—Children, its Causes, Consequence, and Treatment.

THURSDAY.—5 P.M., Dr. G. Stewart: Treatment of Diseases of the Nervous System of Syphilitic Origin.

FRIDAY.—5 P.M., Special Lecture:—Dr. J. S. Risien Russell: A Diagnosis of Affections of the Cerebellum.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.

WEDNESDAY, Feb. 25th.—4.30 P.M., Dr. Beaumont: The Influence of War on Respiratory Disorders.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND, 11, Chandos-street, W.

TUESDAY, Feb. 24th.—2.45 P.M., Paper:—Dr. R. H. Steen: Chronic Hallucinatory Psychosis.

UNIVERSITY OF SHEFFIELD—FACULTY OF MEDICINE POST-GRADUATE DEMONSTRATIONS, at the Sheffield Royal Hospital.

MONDAY, Feb. 23rd.—3.30 P.M., Dr. Nutt: X Ray Examination of Gullet and Stomach.

TUESDAY.—4 P.M., Dr. Hay: Disorders of Motility of Eye.

WEDNESDAY.—3.30 P.M., Dr. Wilkinson: Dysphagia.

THURSDAY.—3.30 P.M., Dr. Skinner: Eczema.

FRIDAY.—4 P.M., Dr. Hay: Diseases of the Optic Nerve.

UNIVERSITY OF BIRMINGHAM—FACULTY OF MEDICINE, in the Anatomical Theatre, Edmund-street, Birmingham.

Post-Graduate Course of Lectures on Venereal Disease:—

WEDNESDAY, Feb. 25th.—4.15 P.M., Mr. B. Whitehouse: Syphilis in Relation to Pregnancy.

MANCHESTER ROYAL INFIRMARY POST-GRADUATE CLINIC.

TUESDAY, Feb. 24th.—4.30 P.M., Lecture:—Dr. E. B. Leech: The Use of Pancreatic Preparations for Digestive Disorders.

SALFORD ROYAL HOSPITAL AND ANCOATS HOSPITAL POST-GRADUATE DEMONSTRATIONS, at the two Hospitals alternately.

THURSDAY, Feb. 26th.—4.30 P.M., Lecture:—Dr. Ward: Bronchial Affections of Childhood. (At Ancoats Hospital.)

Communications, Letters, &c., to the Editor have been received from—

A.—Mr. R. J. Albery. Lond.; Dr. J. E. Adams, Lond.; Messrs. Allen and Hanburys, Lond.

B.—Dr. J. Blomfield, Lond.; Mr. H. A. Barker, Lond.; Dr. W. Langdon Brown, Lond.; Dr. G. Burnet, Lond.; Mr. H. Barwell, Lond.; Dr. R. G. Barlow, Liverpool; Dr. G. Blacker, Lond.; Dr. E. Bramwell, Edinburgh; Dr. H. Brown, Chislehurst; Dr. C. R. Box, Lond.; Dr. H. Barber, Derby; Bread and Food Reform League, Lond., Sec. of; Mr. N. H. M. Burke, Lond.; Capt. F. W. Brunker, R.A.M.C.(T.); Mr. J. Burns, Edinburgh; Mr. H. W. Bayly, Lond.; Sir J. Barr, Liverpool.

C.—Sir J. Colyer, Lond.; Dr. C. Coombs, Bristol; Dr. E. L. Collis, Cardiff; Dr. E. F. Cyriax, Lond.; Dr. H. P. Cholmeley, Forest Edge; Child Study Society, Lond.; Dr. R. C. Clarke, Clifton.

D.—Dr. G. H. Dart, Lond.; Denison House Public Assistance Committee, Lond., Sec. of; Dr. H. Drinkwater, Wrexham.

E.—Mr. W. H. Evans, Lond.; Dr. T. W. Eden, Lond.

F.—Mr. J. A. C. Forsyth, Lond.; Col. M. Flack; Federation of Medical and Allied Societies, Lond.; Dr. J. G. Forbes, Lond.

G.—Dr. W. E. Gye, Lond.; Mr. C. Goulden, Lond.; Dr. J. P. Gray, Exeter; Miss A. Gillman, Lond.

H.—Dr. M. L. Hine, Lond.; Dr. J. Haddon, Denholm; Prof. W. D. Halliburton, Lond.; Mr. W. Hereford, Geneva; Mr. F. G. Hallett, Lond.; Mr. W. W. Hardwicke, Lond.; Prof. W. Hall, Lond.; Prof. L. Hill, Lond.

I.—Incorporated Institute of Hygiene, Lond.; Illuminating Engineering Society, Lond.

J.—Dr. G. Jones, Lond.

K.—Dr. B. C. Kelly, Bow, Devon.

L.—Dr. F. J. Lidderdale, Folkestone; Leicester Public Medical Service, Hon. Sec. of; Mr. G. L. Lawson, St. Bees; Dr. T. P. Legg, Lond.; Dr. J. N. Leitch, Sutton; London Dermatological Society.

M.—Messrs. S. Maw, Son and Sons, Lond.; Dr. E. W. G. Masterman, Lond.; Dr. R. Maclean, Lincoln; Dr. T. H. Morse, Deal; Dr. J. B. Mennell, Lond., Dr. C. S. Myers, Lond.; Dr. R. W. MacKenna, Liverpool; Middlesex Hospital Medical School Lond., Dean of; Miss Marx, Lond.; Manor House Hospital, Lond.; Ministry of Health, Lond.; Dr. J. W. McNee, Lond.; Medical Society of London, President and Council of.

N.—National Provident Institution, Lond.; National Safety Council, Chicago; Dr. H. P. Nottage, Albuquerque.

O.—Rev. E. G. O'Donoghue, Lond.; Ontario, Registrar-General of.

P.—Major C. M. Plumtree, I.M.S.; Dr. G. L. K. Pringle, Harrogate; Prof. K. Pearson, Lond.; Capt. A. H. Priestley, R.A.M.C.; Mr. H. J. Paterson, Lond.

R.—Dr. R. G. Rows, Lond.; Royal Statistical Society, Lond.; Royal Institution of Great Britain, Lond.; R.C.S., M.D.; Royal Mail Steam Packet Co., Lond.; Miss B. F. Runge, Lond.; Royal College of Physicians, Lond.; Rontgen Society, Lond.; Royal College of Physicians, Edinburgh, President of.

S.—Mr. F. D. Saner, Lond.; Dr. T. W. Shore, Lond.; Dr. G. S. Strathy, Toronto; Prof. E. H. Starling, Lond.; Mr. E. G. Slesinger, Lond.; Dr. G. A. Stephens, Liverpool; Sir G. H. Savage, Lond.; Dr. J. S. B. Stopford, Manchester; Dr. H. Spencer, Lond.; School of Sanitary Instruction, Chicago; St. Mark's Hospital, Lond., Sec. of; Prof. G. E. Smith, Lond.; Society of Apothecaries of London, Clerk of; Prof. Comm. G. Sorge, Naples; Save the Children Fund, Lond.; Prof. C. F. M. Saint, Newcastle-on-Tyne; Mr. J. Sherren, Lond.

T.—Tuberculosis Society, Lond., Hon. Sec. of; Dr. H. A. Treadgold, Lond.; Dr. J. Taylor, Lond.; Mr. H. Townsend-Whitling, Market Harborough; Mr. J. Tennant, Lond.; Mr. I. Tewfik, Rochester; Dr. O. P. Turner, Hastings.

V.—Village Centres Council, Lond., Sec. of.

W.—Mr. L. E. Williams, Liverpool; World Trade Club, San Francisco; Mr. C. E. West, Lond.; Dr. H. Williamson, Lond.; Dr. J. Watt, Sutton; Dr. J. P. Walker, Ryde; Mr. H. W. Woodcock, Lond.; West London Hospital Post-Graduate College; Dr. F. J. Waldo, Lond.; Dr. R. T. Williamson, Manchester; Mr. A. R. Walker, Lond.; Prof. R. B. Wild, Manchester; Capt. E. J. Wyler, R.A.M.C., Hilsea.

Z.—Dr. T. Zangger, Zurich.

Communications relating to editorial business should be addressed exclusively to the Editor of THE LANCET, 423, Strand, W.C.

Notes, Short Comments, and Answers to Correspondents.

THE ROYAL EDINBURGH ASYLUM AND THE UNIVERSITY CHAIR OF PSYCHIATRY.[1]

BY PROFESSOR GEORGE ROBERTSON, M.D. EDIN., F.R.C.P. EDIN.,
PHYSICIAN-SUPERINTENDENT OF THE ROYAL ASYLUM, MORNINGSIDE.

THE idea of founding this chair was first brought up early in the nineteenth century by Sir Alexander Morison, but Professor Hope, the chemist, whose opinions carried great weight, was averse to the innovation. Sir Alexander Morison had cited as a precedent for his proposal the comparatively recent establishment of a Chair of Agriculture. Professor Hope replied that the parallel did not hold good. He quite approved, he said, of a Chair of Agriculture, but not one of ploughing, nor, for that matter, of pleurisy; and he evidently classed mental diseases in much the same category. He even expressed the fear, if the thin end of the wedge were thus inserted, that some dropsical old gentleman might leave a sum of money to endow a chair of dropsy or of liver disease, and this argument, which may seem puerile now, convinced his colleagues and blocked the proposal. It has been revived from time to time, but it took nearly a hundred years to get the principle accepted and the necessary action taken.

The managers of the Royal Asylum have now, at a critical period of development in our history, conferred a signal benefit on the University and the Medical School by providing the necessary fund to endow a Chair of Psychiatry. It has therefore occurred to me, in grateful recognition of their public-spirited action, that an appropriate subject for my inaugural address would be an account of the events that led up to the founding of the Royal Asylum. The story forms an interesting romance which it would be a pity to forget, and it also supplies us incidentally with psychological instruction.

The Founder of the Royal Edinburgh Asylum.

The founder of the Royal Edinburgh Asylum was Dr. Andrew Duncan, senior, President of the Royal College of Physicians. Dr. Andrew Duncan was one of the most useful citizens Edinburgh ever possessed. He was full of zeal for his profession, for works of medical benevolence, and for social well-doing generally. It is hard to believe that what he accomplished in his lifetime was the work of one man, and Lord Cockburn was probably in earnest when he wrote that he was the promoter and President of more clubs and societies than perhaps any man in the world. He was the founder of three useful and successful Royal corporations, the Royal Asylum, the Royal Public Dispensary, and the Royal Caledonian Horticultural Society. He also founded the Æsculapian Club, the Harveian Society, and the Medico-Chirurgical Society. He edited for 30 years the "Medical Commentaries" and the "Annals of Medicine," which still exist as the *Edinburgh Medical Journal*. He held two professorships at the University, he served two terms of office as President of the Royal College of Physicians, and he was first physician to the King in Scotland. He founded a sea-bathing club and a gymnastic club, and it is recorded that he even climbed to the top of Arthur's Seat every May-day morning till he was 83 years of age. It is not surprising that so remarkable a citizen should have received the honour of the freedom of the city. Not only do we know that Dr. Duncan was the founder of the Royal Asylum, but we also know how the idea of the need for providing a mental hospital for Edinburgh originated in his mind.

Robert Fergusson.

When a young man, 30 years old, he was called on to treat the poet, Robert Fergusson. Dr. Duncan found Fergusson in a state of furious insanity, living in the home of his mother, an elderly widow in straitened circumstances. Her feeble state and the situation of her house made it impossible to treat the patient or to secure his safety while he remained at home. After fruitless efforts to have him provided for in a more suitable place, he was removed to the City Bedlam. This was situated within the triangular block of buildings behind Teviot-place, and it probably stood exactly opposite to, and within a stone's-throw of, the main entrance of the new University buildings. In one of the cells in this bedlam of the Charity Workhouse the poet Fergusson was therefore confined. The floor of the cell consisted of stone flags, the only furniture was a bed of loose straw, and the opening admitting air and light to it was probably unglazed. After some months the symptoms of morbid elation or mania passed off and despondency or melancholia of a religious kind took their place, this being the typical course of events in the form of disorder known as "manio-depressive insanity." The patient grew thin, became exhausted, and finally died on Oct. 15th, 1774, about ten months after his admission. In the old minute-book recording the deaths the chilling record stands thus: "Mr. Fergusson, in the cels."

Robert Fergusson was a genius. He was one of the three finest poets in the vernacular that Scotland has ever produced. Henley writes: "There can be no question but in his death at four-and-twenty a great loss was inflicted on Scottish literature." In a state of mild mania or elation characterised by a rapid flow of uncontrolled ideas he must have been a supremely brilliant and fascinating, if erratic personality; and in his final phase of religious despondency or melancholia, a most pathetic one. It is therefore not surprising that the deplorable surroundings for treating the malady of one so highly gifted and sensitive made a deep impression on his young physician. He wrote to the Lord Provost: "It is impossible to conceive a more interesting object of charity than the man of genius, when a pauper lunatic." Nothing practical that we know of was done in connexion with this matter between 1774, when Fergusson died, and 1790 when Dr. Duncan was elected president of the Royal College of Physicians, and announced his scheme for providing a mental hospital for Edinburgh.

Awakening Humanity: John Howard.

During this interval of 16 years, the world was not standing still. Some of the most remarkable events in history were taking place, which altered for ever the mental outlook of mankind. A new day was dawning in which a more even sense of justice, a stronger instinct of freedom, and a truer realisation of the brotherhood of man were coming into being. The year after Fergusson died (1775), our American colonists fired the first shots in their struggle for independence, which "shook the world." The year before Dr. Duncan was elected president (1789), the mob of Paris stormed the Bastille, accomplishing one of the memorable events in the history of the world. At this time (1787) Wilberforce formed the Association for the Abolition of the Slave Trade. Not only to the negro in slavery, but to the white man in captivity was sympathy extended, for, by a curious circumstance, it was during this very period of 16 years, between 1774 and 1790, that John Howard, the prison reformer, laboured. When a young man, aged 29, he had been captured at sea, and made a prisoner of war in France. He thus knew from personal experience the horrors of prison life. In 1773 he was appointed sheriff of Bedfordshire, and it was part of his duties to inspect the prisons and prisoners within his jurisdiction. Their misery and neglected condition at once aroused his sympathy, for they recalled vivid recollections of his own painful experience 18 years previously, when a prisoner of war. Such was the volume of emotion thus aroused, that thereafter he devoted the remaining 16 years of his life to exploring the prison world of Europe and ameliorating the lot of the prisoner. This investigation is related to the care of the insane, not only because the insane were treated like prisoners in those days, but also because Howard found that prisons were overcrowded, owing to the presence of insane persons detained in prison because there was nowhere else to keep them in safety. Before the end of his life he had another reason for interesting himself in the care of the insane, for his only son became afflicted in mind and died insane.

It is well known that Howard's work "On the State of Prisons in Europe" attracted universal attention, but it is not so well known that his reports on hospitals and the care of the insane were also received with great respect. In proof of the influence exerted by him on the treatment of the insane stronger evidence cannot be advanced than this: that Esquirol, when describing the great reform which is the glory of his teacher, Pinel—namely the introduction of the humane system of treatment—frankly points out that Howard's work led up to it. Increased solicitude for the care of the insane was therefore the natural result of the history of the time. It is not possible to explain otherwise how movements for their amelioration should have been started simultaneously by persons acting quite independently in so many different parts of Europe—Andrew Duncan at Edinburgh in 1790; Joseph Paquin at the Chambery Asylum in Savoy in 1791; William Tuke at York in 1792; Philippe Pinel at the Bicêtre in Paris in 1793; and Vincenso Chiarugi at the San Bonifazio Asylum in Florence in the year 1793.

There were two other factors that probably determined Dr. Andrew Duncan to initiate his good work. The first in time and importance, I believe, to have been the visit of the poet Robert Burns to the city of Edinburgh in the winter of 1786–87. The second was the attention directed to the malady by the insanity of King George III. Burns had a great admiration for the work of the poet Fergusson, which

[1] An abstract of an inaugural address delivered on Jan. 22nd, 1920.

served as a model for his own. Shortly after his arrival in Edinburgh he made inquiries regarding the burial place of Fergusson, who had been interred in a pauper's grave in the Cannongate Churchyard. Burns found the grave unmarked and neglected, and obtained permission from the Kirk Session of the Cannongate to erect a tombstone to the poet's memory. It is possible that he obtained his information regarding the burial place from Fergusson's physician, whom we know to have been one of those who was keenly interested in him during his last illness. Duncan was also sufficiently interested in Burns to subscribe for a copy of the Edinburgh edition of his poems.

It appears to be a not unreasonable surmise that the interest shown by Burns in the poet Fergusson attracted attention to him and was the means of reviving in Dr. Duncan's mind his melancholy end, and with it the absence of adequate means of treating mental disease in Edinburgh. This revival 12 or 13 years after of a deep impression made during youth, with the resulting emotional energy that such an occurrence sets free, is exactly comparable to what happened in the case of John Howard. As already stated, Howard's interest in prisons was awakened after a period of dormancy lasting some 17 or 18 years, since the time he himself had been a prisoner of war. These two instances illustrate that a concrete experience, especially if received in impressionable youth and accompanied by strong emotion, may be in after life the irresistible motive power of high ideals and of conduct. The other event that probably influenced Dr. Duncan was the insanity of King George III. There is no doubt that the attacks of insanity to which the King was subject, directed attention to this malady in Great Britain, which it would not otherwise have received.

The Foundation.

The opportunity for which Dr. Andrew Duncan, now professor of physiology in the University, had been waiting came at last when he was elected President of the Royal College of Physicians on Dec. 2nd, 1790. He lost no time in carrying into effect the project on which he had set his heart. On the day following his election to the post of President, in virtue of his office as representative of the College of Physicians on the board of managers, he revisited the City Charity Workhouse and inspected the cell of its Bedlam in which Fergusson had died 16 years before. He immediately brought the matter before his council, and referred to it at the first meeting of the College, held in February, 1791. A committee was appointed, which reported in May that the establishment of an asylum in the neighbourhood would be of the utmost advantage, and made proposals as to the question of funds and the appointment of trustees. In August the report was finally approved, and the President was instructed to approach the Lord Provost on the subject. On Feb. 7th, 1792, it was reported that all the gentlemen proposed as trustees had accepted nominations, and the College then subscribed a sum of £25 towards the scheme. Three weeks later, on the suggestion of the College of Physicians, circulars were issued by the Lord Provost and other trustees and distributed to the public, describing the objects of the proposal and requesting subscriptions. On this date, therefore, Feb. 26th, 1792, the whole scheme for providing an asylum and suitable treatment for the insane in Edinburgh was publicly launched. By a strange coincidence only six days later, March 3rd, 1792, William Tuke at the close of the quarterly meeting of the Society of Friends, held at York, proposed the establishment of a retired habitation for deranged members of the Society, afterwards to become so well known as "The Retreat."

Owing to a variety of causes, of which the Napoleonic wars and the disturbed state of the country were the most important, subscriptions did not come in freely for 14 years, in spite of the nest-egg provided by the Royal College of Physicians. This was not surprising, as during this period there was a complete interruption of charitable work all over the kingdom, as there was of charitable legislations as well. A sum of £2000 was, however, given towards the scheme on July 23rd, 1806, by the Crown (46 George III., c. 156) from funds obtained by the sale of the highland estates forfeited in the Rebellion of 1745, a most unexpected source from which to obtain money for such an object. This sum enabled the trustees to purchase a site for the new asylum in the adjacent village of Morningside, now absorbed by the city. Generous contributions also resulted from a new address to the public composed by the Very Rev. Dr. Baird, Principal of the University. The foundation-stone of the asylum was ultimately laid by Lord Provost Coulter on June 8th, 1809, and the first patient was admitted on July 19th, 1813.

By the establishment of a mental hospital in one of the suburbs of Edinburgh, the first requisite for clinical instruction in mental diseases was thus provided for. This was one of the objects anticipated by its founder, and held forth by him among the other claims which it had upon the liberality of the public. This object was still further emphasised by a medical committee over which Dr. David Maclagan, the father of the late Sir Douglas Maclagan, acted as convenor. In their report, dated Dec. 23rd, 1835, it is stated that under judicious regulations the institution may be run most usefully as a school of instruction in the observation and treatment of mental diseases. Thirteen months afterwards the managers resolved to erect an additional building for the reception of parochial patients, and this was opened in 1841. It is now known as the West House and it is here that clinical instruction has been given regularly since the year 1853.

The Chair of Psychiatry.

It is evident that the board of managers have always taken a serious view of their responsibility for the provision of facilities for clinical instruction. There is, in consequence of this attitude, no mental hospital where the tradition of teaching exists to a stronger extent than in the Royal Asylum at Morningside, nor any medical school that has been better served than that of Edinburgh. It is only in keeping with this high tradition and to further its objects that the board of managers, conceiving the time to be ripe, have finally thought it to be their duty to endow a Chair of Psychiatry in the University of Edinburgh.

MENTAL DEFECTS AND THEIR DIAGNOSIS.

IN the course of two lectures delivered under the auspices of the Central Association for the Care of the Mentally Defective at the Fabian Hall, Tothill-street, Westminster, London, S.W., on Jan. 20th and 27th, Dr. Letitia Fairfield dealt with the types and varieties of mental deficiency, with their differential diagnosis from blindness and deafness. She said that the stigmata of degeneration, such as a sharply incurved little finger, a marked epicanthus or a high palate, were frequently found in normal intelligent persons, but the occurrence of two or more of these signs commonly indicated mental defects. The difference between the normal and abnormal child did not lie only in the structure of the muscles and bones of the solid parts of the face, or in the pose and walk; much of the characteristic appearance of an individual depended on the control of the muscles by the mind, and it was here that a contrast was often manifest. After describing the typical appearance of the microcephalic and hydrocephalic, and other abnormal types, the lecturer passed on to the mental characteristics caused by endocrine deficiencies; and lastly to the puzzling condition caused by such defects in the senses leading to dullness, often mistaken for mental defects.

Differential diagnosis.—Certain abnormalities in a child might produce symptoms that would suggest lack of intelligence when the trouble was really a sense-deficiency of hearing or vision. The diagnosis was very important and should be made in the home if possible. In the days before school inspection these defects were common, but in recent years the lecturer had had to deal with only one case, that of a girl who was thought to be mentally deficient but who really was suffering from deafness. These cases could only be differentiated by keen observation. A baby in the cradle would not be likely to indicate lack of sight unless it was almost completely blind. Such complete blindness would seldom occur without an obvious defect in the eye or in the presence of nystagmus; this was a most important sign to watch for. A child might respond quickly to sound but take no notice of bright light; an idiotic child was frequently blind. When testing one sense the others should be excluded. The observing mother seldom made a mistake. When the child was able to walk it should be noted whether it stumbled, whether its interest was attracted by anything pretty, whether it held a bright object close to its face. Its inability to recognise things by feel was another test. The distinction between the deaf child and the defective was often very difficult, and was a common source of error both in teachers and doctors. A child very rarely knew that it was deaf, because it had no standard of hearing, and thus could not plead deafness in its own defence. More especially was there difficulty if the deafness was partial. A clever deaf child was much more likely to be taken for a mental deficient than a stupid one. A totally deaf or stupid child would lack speech, and this would at once arouse suspicion that the child was deaf. If the child was only partially deaf and at the same time clever it would learn to speak and to use its other senses to make up for the lack of hearing. Sometimes it would unconsciously learn lip-reading. In testing hearing care should be taken not to make signs, and a noise made behind the child's back, such as clapping hands, should be performed so far away that the patient would not feel any movement of air. In testing the child by the voice the forced whisper should be used, so as to avoid giving indications to the child by the pitch of the tester's voice. The child should stand sideways to the operator, at a distance of 20 feet, and have the ear on the far side blocked. The pronunciation of 66 and 99 were good tests, but sibilants, dentals, and labials should be used in turn. In adenoid cases deafness was often intermittent, and a set test was not always reliable. Idiotic and paralysed children were often completely deaf.

GRADE "A" MILK.

THE rules governing the sale of Grade "A" (Certified) Milk are to be subject to revision after March 14th next, and new licences will be issued only when the wholesale or retail distributor complies with conditions satisfying a representative of the Ministry of Health or of the Scottish Board of Health or of specially empowered local authorities. The herd from which the milk is obtained must contain no cow, or heifer in milk or in calf, or other bovine animal, kept in contact with the herd, which has not passed specified tuberculin tests. The additional conditions are that:—

1. The milk must be cooled and bottled immediately after production for delivery to the consumer in bottles which have previously been sterilised by steam on the premises where the milk is produced.

2. Every bottle must be covered with a suitable outer cap overlapping the lip of the bottle, and this cap must bear the name and address of the producer or of the farm where it is produced, the day of production, and the words "Grade A (Certified) Milk."

3. The milk on examination at any time before delivery to the consumer must not contain *B. coli* in one-tenth c.cm. (in each of two tubes) or more than 30,000 bacteria per c.cm.

4. The milk must not be delivered to the consumer as Grade "A" (Certified) Milk more than two days after the day of production.

COSTLY DRUGS IN GERMANY.

THE following returns taken from the *Economic Review* (Feb. 11th, 1920) are of interest in connexion with Germany's dependence upon external sources of certain drug supplies:—

A report on the chemical market in 1919 states that few markets showed such chaotic conditions, owing to the impossibility of meeting the colossal world demand for chemicals and, especially, pharmaceutical articles.

The abolition of the German war-time Acts in the territory occupied by the French has resulted in an almost unlimited trade in all kinds of medicines, which hardly contributes to improve the situation. Many of the new chemical companies, whose name is legion, show a regrettable lack of expert knowledge. A large number of metal works have established "chemical sections." The extraordinary increase in prices is shown by the following figures (in marks):—

	1914.	*1917.*	*Jan., 1919.*	*July, 1919.*	*Dec., 1919.*
Quinine. hydrochloride...	44	113	137	500	1200
Chloroform	1·40	5·20	6	15	30
Silver nitrate	55	145	165	450	1050
Pot. bromide (1910) ...	2	3·10	3·75	15	60
Menthol recryst.	28	72	160	480	1150
Resorcine (1912)	6	15·50	50	—	390
Pot. iodide	26	32·50	127	—	450

The report refers to chemical preparations for the supply of which Germany is dependent upon foreign countries. In the middle of 1919, for example, English borax at about Mk. 6 ousted the German article at Mk. 28 from the market, but owing to the unfavourable exchange the price rose to Mk. 12-Mk. 14 at the end of 1919. (*Frankf. Ztg.*, Jan., 23.e.)

The figures, while showing clearly an enormous advance in prices, do not convey the cost by weight of the drugs quoted. The quotations, however, are evidently for 100 g. It is notable that synthetics do not figure prominently in the list.

FEES OF OUR ANCESTORS.

To the Editor of THE LANCET.

SIR,—Those who had the pleasure of listening to Sir D'Arcy Power's address on the above subject, delivered before the Royal Society of Medicine and published in THE LANCET of Feb. 7th, wished that he had not limited himself to 20 minutes; he might have extended the period to one hour without exhausting either his own repertoire or the interest of his audience.

His observations concerned chiefly payments made by civilians to their doctors. May I add a few of those made by Royal personages?

When the Court physician was a cleric it was only natural that payment should, in part at all events, take the form of presentation to a "living," and the number of livings bestowed was generally a measure of the degree of favour in which the physician stood with his Sovereign. Thus Linacre held simultaneously or in quick succession one canonry, three prebendaries, and five rectories, and Dr. Chambre, who preceded Linacre as physician to Henry VIII., not only held several livings in this country, but also an archdeaconry in Ireland, from personal service in which he was exempted on account of his attendance at Court.

Payments to non-clerical physicians and surgeons make a curious recital at the present time. William Holme, for instance, surgeon to Edward III., received permission to "have, chase, and carry away" all manner of wild beasts infesting the King's forests; while to John Middleton, physician to Richard II., were granted all fines due to the King through the escape of prisoners from York Castle, a remuneration, therefore, which would depend upon the carelessness of the governor and the cleverness of the prisoners. William Bredwardyne, surgeon to Richard II., was appointed constable of Dryslwyn Castle, in South Wales, and William Hatclife, physician to Henry VI., was appointed "Keeper of the Water of the Fosse," for which he was paid 6*d.* a day. A convenient way in which an impecunious monarch discharged his obligation was by allowing his surgeon to mint his own money, subject, doubtless, to restrictions; while a gentleman, whose name I have forgotten, was granted a manor bordering upon the South Coast upon the condition that he should accompany the King whenever the latter went to sea and support the King's head during sea sickness.

I am, Sir, yours faithfully,

S. D. CLIPPINGDALE.

Holland Park-avenue, W., Feb. 14th, 1920.

INDIAN INFANT WELFARE EXHIBITION.

THE Infant Welfare Exhibition has decided to award medals and certificates of merit for exhibits offered in the following classes:—

Class 1.—For the best model of a dwelling-house showing hygienic compared with unhygienic conditions. The models may be of any size.

Class 2.—For the best exhibit shown by any business firm in the interest of maternity and infant welfare.

Class 3.—For the best exhibit illustrating welfare work being carried on among employees.

Class 4.—For the best model outfit such as could conveniently be supplied to midwives and dais for use at childbirth, to mothers for preparation for childbirth, to mothers for use in connexion with first-aid and home nursing.

Class 5.—For articles calculated to improve the conditions of infancy and childhood.

Class 6.—For the best exhibit of snapshot sketches or cartoons of a nature calculated to increase public interest in maternity and infant welfare work or to illustrate matters relating to hygiene.

Class 7.—For the best essay on fly destruction.

Class 8.—For the best device for fly destruction. This may be any type, mechanical, medicinal, &c. The attention of commercial firms is specially drawn to this offer.

In addition, medals are offered by associations and private individuals as follows:—

1. By the Victoria Memorial Scholarship Fund for a model lecture, "How to Conduct a Confinement in a Poor Indian House," suitable for various specified audiences.

2. By the Association of Medical Women in India for the best set of simple models to be used in connexion with the teaching of midwifery.

3. By the Association for the Provision of Health and Maternity Supervisors for the best colloquial of "Talks to Mothers."

4. By the Association of University Women in India (Delhi and Punjab Branch) for the best model plans of a house suited to Indian families with different incomes.

5. For the best essay on the "History and Practice of Ayurvedic Midwifery," to be written in Hindi.

6. For a lecture in simple style on "How to Improve the Conditions of Childbirth in India according to the Shastras," to be written in English or Bengali.

7. For a model lesson showing the best food calculated to improve the condition of childbirth in a poor Indian house where vegetarianism is followed.

The above medals will only be awarded if a certain standard of excellence is reached. The essays for these competitions may be written in any language except where otherwise stated, and are open to all classes of people.

Major, R.A.M.C.—We should not be safe in making such wholesale charges against medical men without being able to give our authority.

BOOKS, ETC., RECEIVED.

BAILLIÈRE, TINDALL, AND COX, London.
Misshapen Noses and their Surgical Correction without Cicatrix. By J. Bourguet, M.D. Paris. Pp. 72 (60 plates). 3*s.*

CASSELL AND CO., LTD., London.
A Text-book of Gynæcological Surgery. By Comyns Berkeley M.C., M.D., and Victor Bonney, M.S., M.D. Second edition. Pp. 829. 42*s.*

DANIEL, C. W., London.
Arms and the Doctor. By H. Gervis, Captain R.A.M.C. (T.F.). Pp. 86. 2*s.* 6*d.*

SAUNDERS, W. B., AND CO., LTD., London.
The Health Officer. By Frank Overton, M.D., and Willard J. Denno, M.D., Medical Director of the Standard Oil Company. Pp. 512. 20*s.*
Nervous and Mental Diseases. By Archibald Church, M.D., and Frederick Peterson, M.D. Pp. 949. 9th ed., thoroughly revised. 30*s.*
Manual of Obstetrics. By Edward P. Davis, M.D. Pp. 478. 2nd ed., revised. 15*s.*
Principles and Practice of Physical Diagnosis. By John C. DaCosta, Jun., M.D. Pp. 602. 4th ed., thoroughly revised. 20*s.*